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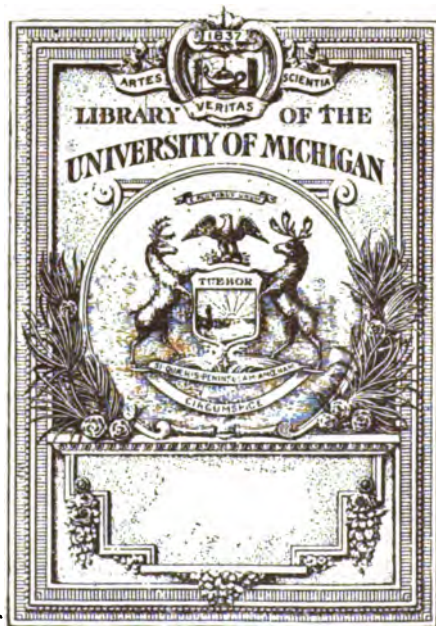
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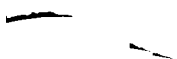
Fancourt BARNES, M.D.



LONDON:

JOHN BALE & SONS, 87-89, GREAT TITCHFIELD ST.,
Oxford Street, W,

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THE BRITISH GYNÆCOLOGICAL JOURNAL

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MAY, 1890.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, JANUARY 8, 1890.

ARTHUR V. MACAN, M.B., PRESIDENT, IN THE CHAIR.

PRESENT : 22 Fellows, 2 Visitors.

The Officers and Council for the ensuing year were duly elected.

Dr. HEYWOOD SMITH shewed an instrument manufactured by Messrs. Mayer & Meltzer which combined the advantages of the duck bill and the bivalve speculum. It also admitted of being readily taken to pieces for purposes of cleaning. He said he had had no personal experience of its use.

Dr. BANTOCK observed that the same objection applied to this as to all bivalve speculums. They were all of one size and nothing had yet been invented to take the place of the Neugebauer speculum.

Dr. FENTON said the posterior valve required to be longer than the anterior, so as to open up the posterior *cul-de-sac*.

Dr. BAGOT mentioned that in Dublin they used a modification of Collin's speculum, which had shorter blades, and in which the posterior blade was longer than the other. He

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thought that with this form of speculum one could not draw down the cervix enough owing to the length of the blades.

Dr. BARNES asked whether any speculum brought down the speculum cervix, he only knew of one that did so, and that was his own.

The PRESIDENT said that the specimens he was about to shew bore on the question of the vaginal extirpation of the uterus. The patient was a woman about 39 years of age, who suffered from hæmorrhage. When he was called to see her in consultation he found that one lip of the os was thinned out over a tumour resembling a fibrous tumour. She was unmarried and had not had any children. He admitted her to the Rotunda Hospital, and scraped out the tumour from the cervix with great and suspicious ease, and curetted the whole of the interior of the uterus. For a time she was relieved and the hæmorrhage ceased. Subsequently, however, the hæmorrhage returned and he admitted her into a ward at Sir Patrick Dun's hospital, where, ten weeks after the first operation he extirpated the uterus. The patient, however, had a sharp rise of temperature on the next afternoon, and died of peritonitis on the seventh day. From the vomiting and low temperature he thought she might have ileus, and as he had already seen a case of the kind he determined to make an effort to save her, and he therefore opened the abdomen. There was acute peritonitis, and this rendered it difficult to make a thorough examination of the intestines. She died next day. The specimen had been examined and proved to be carcinoma. In the interior of the uterus there was an adenoma, of which the remains could be seen in the specimen.

He also shewed a specimen removed from an unmarried servant girl, 28 years of age, who was admitted with a large abdominal tumour, suffering from a good deal of pain. On examination he thought it was probably an ovarian tumour, although it was difficult to make an accurate diagnosis. On opening the abdomen he found the tumour was quite solid. The origin of the growth was two-fold. There were two pedicles, one was from the end of the ovary and there was

another pedicle with a wide attachment to the opposite broad ligament. It was a question as to whether it grew from the ovary or from the broad ligament. Perhaps on insufficient grounds they came to the conclusion that it was a solid tumour of the ovary. When examined it was found to be a fibro-sarcoma, a rare form of disease. It was now over six months since she had been operated upon, and she was still quite well. He added that if one had suspected that it was malignant one could easily have removed part of the ovary. This was, however, not suspected at the time.

Dr. BANTOCK recalled a case in which several fibroid tumours of the uterus existed prior to the supervention of cancerous disease. One patient, on whom had been performed ovariectomy also had a number of fibroids. At the time of the operation there was no appearance of cancerous disease, but two or three years later she succumbed to cancer of the uterus. Another case was that of a patient who had had her appendages removed for menorrhagia due to small fibroids, and for a year or two she experienced very great relief. Then the discharge and pain declared themselves, and she became the subject of pronounced carcinoma of the cervix, evidently quite independent of the fibroid disease. He said he was not clear as to the extent of the connection with the broad ligament. He observed that it was not rare for sarcomatous tumours to form connections by adhesions.

Dr. HEYWOOD SMITH urged that it would be desirable to have a microscopic examination made of the growth in order to make out clearly whether it came from fibrous or epithelial elements. As the disease appeared to have attacked the cervix he thought it was very probably of an epitheliomatous nature.

Dr. ROUTH said he was certain that one of the common forms of degeneration of these fibroid tumours was cancer. It was by no means uncommon to find one part of the tumour strictly fibrous in character while lower down there was distinct evidence of cancerous elements. He observed that in a person with a strong hereditary predisposition to

cancer the irritation caused by the presence of fibroids might determine the cancerous formation.

Dr. BAGOT, in reference to the remarks of the preceding speaker, observed that carcinoma could only arise from epithelial structures, but sarcomatous growths could start from fibroids.

Dr. BANTOCK read the notes of a case of double dermoid tumour in a married woman aged 30, who had her first child in July last. She last menstruated on September 10th, and she came into the Samaritan Hospital in the beginning of December with a large abdominal tumour on the right side. He operated thirteen days after admission and removed the tumour, which he handed round. It was distinctly dermoid, and contained hair, &c. He had considerable difficulty, owing to the shortness of the pedicle. He had neglected to adopt his usual practice, mentioned in his recent paper, of applying a ligature to the outside of the pedicle first of all. It was not very thick and he thought it would be sufficient to compress it and tie it with a figure of eight ligature, with a subsequent circular ligature. Before, however, he had completed the operation he found the pedicle had slipped, and he had a good deal of difficulty in picking it up again, and it was not until he had applied three or four extra ligatures that he was satisfied. Even after that there was some bleeding from the pelvis, the source of which could not be made out, and he therefore kept the patient well under observation and drained. After removing the tumour, much diminished in size by the escape of its contents, he came across another one of the same character on the other side, which he also handed round. In consequence of the bleeding he was obliged to use a drainage tube. It was in for nine days, but on the seventh and eighth days there was a distinctly unpleasant odour, and he washed out the cavity with sulphurous acid, which effectually removed it. He mentioned that along with these tumours the uterus was enlarged, apparently of the size of a two or three months' pregnancy. The patient, however did not abort, and was doing well, and there was every prospect of her going

her full time. He added that the pregnancy was made out prior to operation. The extraordinary and interesting point was the fact of the woman becoming pregnant with both ovaries in such a disorganised condition. He proposed to have the specimens carefully examined to see if any healthy ovarian tissue could be found, for some there must have been. He said it was easy enough to understand that some ovarian tissue might remain, because dermoid cysts were congenital, and it did not follow that the whole of the organ must necessarily be involved. The only inconvenience complained of was the weight and pressure of the tumour, which weighed over four pounds. The tubes were perfectly healthy.

Dr. BARNES hoped that Dr. Bantock would give the Society the subsequent history of the case.

The PRESIDENT said that the fact of the woman having conceived and borne a child was sufficient evidence of there having been some healthy tissue left.

The PRESIDENT then delivered the following valedictory address :—

On the Vaginal Extirpation of the Uterus.

BY ARTHUR V. MACAN, M.B., M.A.O., Univ. Dub.

IT is very usual for a President at the close of his year of office to give a short account of the principal papers read and specimens exhibited during the preceding session. If I depart from that time-honoured custom to-night it is because, being but seldom able to attend your meetings, I think it better to use this opportunity to bring under your notice a subject that has lately greatly occupied my attention, rather than give you a *résumé* of papers which you can all find reported in the *Transactions*. That subject is the vaginal extirpation of the uterus, a specimen of which, removed a short time ago for cancer, I have to-night had the honour of exhibiting to the Society. Another reason why I would wish to bring this subject before you is that, as far as I can find out from the *Transactions* of the Society, it has only once

before been alluded to at your meetings. This is now more than two years ago, when Dr. F. A. Purcell exhibited here a very similar specimen to mine, and gave the results obtained in four cases where he had performed the operation. In three out of four of Dr. Purcell's cases a return of the disease took place within a few months, and though he took especial care to draw the attention of the Society to the fact that these three cases were very unfavourable for the operation, on account of the extensive implication of the vaginal walls, still I cannot but think that the unfavourable views then expressed by some of our Fellows, both as to the operation itself and its results, were, to a large extent, based on the unfavourable result in these cases.

Since that time the operation has been very extensively practised on the Continent, its indications more accurately fixed, its technique greatly simplified, and its mortality and final result to a great extent determined.

I think, therefore, that we are now fairly in a position to find answers to the following questions :—

1. What is the mortality of the operation ?
2. In what percentage of cases, when it is done for cancer, may a permanent cure be reasonably looked for ?
3. What are the indications for its performance in malignant disease ?
4. In cases in which the operation fails to bring about a permanent cure, is the condition of the patient, when the disease recurs, better or worse than it would have been had the operation not been performed ?
5. Is the mortality of the operation in skilled hands sufficiently low to justify us in resorting to it in cases that are not necessarily fatal to life, like cancer ?
6. What is the best way of performing the operation ? What are the chief dangers and difficulties likely to be experienced, and how can they best be avoided ?

1. What is, then, the mortality of the vaginal extirpation of the uterus ?

In trying to answer this question it would be obviously unfair to collect together all the cases of vaginal extirpation

of the uterus that have ever been published, and therefrom deduce the mortality of the operation. As well might we try to determine in a similar manner the necessary mortality of ovariectomy. If we want to know what should be the death-rate of this operation we would, I think, prefer to follow the practice of some single man who has had great experience in the operation, and take his mortality as our standard. Even then we ought in fairness to exclude a large number of the early cases, where many questions as to the technique of the operation itself, or the conditions under which it can be most favourably performed, were still unsettled. In this way only can a fair death-rate be settled. Such a man I think we may find for ovariectomy in Mr. Lawson Tait, while for the operation of the vaginal extirpation of the uterus Professor Leopold, of Dresden, who has lately published the results of 110 cases in the xxx. and xxxvi. volumes of the *Archiv f. Gynaekologie*, may very well be our standard. In 80 of these 110 cases the operation was performed for malignant disease of the uterus; in 17 cases it was done for the removal of myomata; in 5 cases for prolapse of the uterus; in 6 cases for disease of the uterine appendages; and in 2 cases for profound neurosis, which was in one case hystero-epilepsy. Of the 80 cases, where the operation was performed for malignant disease of the uterus 4 died. A mortality of 5 per cent., one of ileus and three of sepsis. In one case, when the disease was very extensive, the sepsis took its origin in a portion of the carcinomatous mass that was left behind. In a second case a suture which was found necessary to stop hæmorrhage was passed by mistake through the rectum, and the wound became infected from this source. In the third case there were very extensive adhesions to the rectum, and infiltration of the parametrium, and at the post-mortem it was found that the serous coat of the intestines was involved. In two, therefore, of the fatal cases Professor Leopold found that the disease had extended so far as to make the cases quite unsuitable for the operation. Further, the accident of passing the suture through the rectum might by more care be

avoided in future, while it is probable that when the symptoms due to ileus are better understood, this cause of death will probably be avoided by an early abdominal section. Hence there is reasonable cause to hope that even this mortality of 5 per cent. may in future be still further considerably reduced.

2. Before passing on to inquire in what percentage of cases a permanent cure was effected, I may remark that there is a strong consensus of opinion among those who have performed very many of these operations, that if a patient remains free from any return for two years the disease has in all probability been entirely eradicated. Of course the absolute truth of this proposition may be questioned, but there can be no doubt that the cases in which a recurrence of the disease first shows itself after two years are very rare.

Let us, then, examine the results obtained in these cases by this standard.

Of the 80 patients operated on for cancer, only 42 have been operated on for more than two years, and of these 42 cases 27 are still free from a recurrence. In other words, of 42 cases that were otherwise certain to die of carcinoma, 27, or $64\frac{1}{2}$ per cent., have been saved by the operation.

3. The indications for the operation in cases of cancer will, I think, be best brought out by considering the operations with which in such cases the vaginal extirpation comes, so to speak, in competition. The chief of these is the high amputation of the cervix according to Schroeder's method. Against this operation and in favour of the total extirpation is the fact that, it is impossible to say beforehand how high the disease reaches, and therefore as the mortality of the total extirpation is, if anything, less than that of the high amputation, the former operation is every day finding more favour on the Continent. The dangers and disadvantages of both Freund's operation, and of the supra-vaginal amputation of the fundus almost exclude them from competition. A more difficult question to settle is what amount of infiltration of the parametria and fixation of the uterus contra-indicate the operation.

Slight infiltration of the broad ligaments certainly does not, as such infiltration has been found in many cases to be of an inflammatory, and not of a cancerous, nature. Of fourteen of Leopold's cases in which this was present the disease has only returned in three. As long as the uterus can be drawn down, so long is the operation allowable. It would seem, however, that infiltration of the posterior ligaments is a more serious contra-indication than a similar condition of the broad ligaments. In a considerable number of cases, however, we may, I think, consider the indications for the operation to be absolute. For instance, in cases of carcinoma of the vaginal portion and cervix, when the vaginal walls are not involved, and the uterus is itself free, and it is uncertain how high up towards the fundus the disease reaches. Also in all cases of carcinoma of the fundus when the uterus is not too large, and the parametria are not at all, or very slightly infiltrated. Even when the disease involves to a greater or less extent the anterior vaginal wall, it would seem better to dissect this off as close as possible to the mucous of the bladder, rather than at once give up all hopes of a permanent cure by the operation.

4. The question whether the patients in whom the disease sooner or later recurs are in a better condition than if they had not been operated on is answered by Leopold unhesitatingly in the affirmative. This, however, does not agree with the views put forward by some members of this Society, when Dr. Purcell brought forward his cases, but I think it may fairly be concluded that their condition cannot be very materially worse, and does not therefore weigh very heavily against the operation when done in suitable cases.

5. Now if we admit that the mortality of the operation when performed for cancer is only 5 per cent. or under, I think it may readily be conceded that there are other conditions besides malignant disease for the cure of which the vaginal extirpation is justifiable. Thus, Dr. A. Martin, of Berlin, has several times performed it in cases of menorrhagia, which had resisted curetting and even the removal of the

ovaries. And, as I have already mentioned, Leopold has performed it in thirty cases for other indications besides cancer, such as some forms of myomata, diseases of the uterine appendages, severe neurosis, and for prolapse. In this practice, he has been more or less followed by other operators. But it would lead me too far to-night to try and discuss the limits of the operation, in these several classes of cases, so I will pass on to consider our last question, viz. :—6. What is the best and simplest way of performing the operation? What are the chief difficulties and dangers likely to be met with, and how can they best be avoided?

After a thorough disinfection of the vagina, and as far as possible, the uterine cavity itself, the cervix is drawn down forcibly by means of a forceps, and the woman being in the stone position, the cervix and fornices of the vagina are brought into view by means of a Simon's speculum and retractors. The mucous membrane of the vagina is next incised all round the cervix, and the speculum being withdrawn, the bladder is separated up as far as possible from the front and sides of the cervix by the fingers. This is a very important step in the operation, for if the bladder be not well separated, there will be a danger of including the ureters when tying the broad ligament.

The cervix is next freed as high as possible posteriorly, so that nothing but that portion of the broad ligament which carries the uterine vessels is left unseparated at each side.

In order to tie the right broad ligament the cervix is drawn firmly over to the left side, and the lowest portion of the ligament carried forward on the tip of the left index finger, and transfixed with a stout (strongly curved) aneurism needle, carrying a ligature from before backwards, and this portion tied and separated from the uterus. We can then do the same on the left side, forcing the ligament forward with the right index finger and passing the ligature with the left. We can thus tie and cut alternately successive small portions of both broad ligaments, till finally the uterus is entirely separated from its attachments. The danger of including the

ureter in the ligature is best avoided by separating the bladder freely from the uterus, and drawing the latter well down while passing the ligature. The exact period of the operation when the anterior and posterior *cul-de-sacs* are opened is not very material, nor is any clamping of the broad ligaments required before separating the portion included in such ligature. After the uterus is removed the vagina and Douglas's space should be thoroughly disinfected, and the stumps of the broad ligaments drawn gently down by means of the ligatures, the whole vagina well powdered with iodoform, and the ligatures cut short. I do not think that either a drainage tube or plug-ging with iodoform gauze is in the least necessary.

The after treatment of these cases is simplicity itself. For unless the ureters have been tied or infection takes place, the patient's temperature is quite normal, and they are quite free from pain. To use Schroeder's expression, "they lie there like ordinary puerperal cases." The stitches need not be disturbed for ten or twelve days, and the patient may be discharged in three weeks.

The chief difficulties that may be encountered are from a very narrow vagina, fixation of the uterus, or unusually firm adhesion of the bladder to the cervix. The vagina, if very narrow, can be freely incised, and the uterus becomes much more movable after the vaginal wall has been incised all round it, while with patience and perseverance the bladder can usually be peeled off without tearing it through. Should this, however, happen the rent can readily be sewn up.

The dangers of the operation are but few, viz., hæmorrhage, infection, and in some rare cases where the bladder is hard to separate, tying the ureters. The danger of hæmorrhage is, however, chiefly due to including a large mass of the broad ligament in one ligature, and may certainly be avoided. The danger from sepsis is harder to overcome. If the vagina is filled with a malignant mass, this should be removed as far as possible with a Simon's spoon, and the surface cauterised. In cases where the disease is confined to the inside of cervix

or fundus we should wash out the uterus, and plug the cervix with iodoform gauze, or inject an iodoform emulsion into the cavity. The danger of infection from the rectum will best be avoided by care in the introduction of the ligatures, by avoiding any rectal examination either immediately before or during the operation, or by a most thorough disinfection of the hands when any such examination is found to be necessary.

I cannot conclude without trying to impress on all, but more especially those engaged in general practice, the immense importance of making an early diagnosis in all cases of menorrhagia. For the success of the vaginal extirpation of the uterus mainly depends on each case presenting itself for operation while the uterine ligaments are still free from infiltration, and before the disease has had time to implicate the vaginal walls.

On the motion of Dr. BARNES a vote of thanks was agreed to by acclamation to the President.

The TREASURER (Dr. Bantock) then read the Annual Report, showing the Society to be in a prosperous financial condition, the number of members in arrears with their subscription having been very materially reduced.

Dr. FANCOURT BARNES congratulated the Society upon the absolutely satisfactory nature of the Report, and he proposed a vote of thanks to the Treasurer for the admirable way in which he had fulfilled very delicate and ungrateful duties. With that vote he wished also to associate the name of Dr. Bedford Fenwick, the senior and outgoing Secretary, who had had to carry out the tedious negotiations with reference to the transference of the Society to the new premises.

Dr. ROUTH seconded the motion, which was agreed to by acclamation.

Dr. BANTOCK and Dr. FENWICK having replied in suitable terms—

Dr. R. T. SMITH showed an ovarian tumour removed the week before. The interest of the case was chiefly clinical. The patient had been examined by several authorities and thought

to be pregnant because she had a tumour reaching above the umbilicus. She was seen by Dr. Fenwick last week, when she was suffering from shock, and he diagnosed ovarian tumour with possibly a twisted pedicle. He advised rest, but three days later she had another attack with intense shock and vomiting, and two days after that she was sent to the hospital. The day after admission the pain, &c., recurring, he operated. On making the incision some clear fluid and flocculent matter escaped. He thought it was a case of rupture of part of a multilocular cyst and there were some ecchymoses, which might mark the seat of the rupture. Two days after the operation she was very ill. Temperature 99°, but the pulse 120°. As nothing but clear serum came from the tube he took it out, and she then took a turn for the better and was now doing very well. The tumour was an ordinary multilocular cyst, containing glairy fluid and some blood. He added, that there was marked peritonitis at the time of the operation.

Dr. BEDFORD FENWICK said that when he examined the patient a first time the tumour reached to within two inches of the ensiform cartilage, but on the second occasion the dull line had come down nearly to the umbilicus. It looked as if there had been some oozing at the back of the tumour, where there was a shrunken puffy part pointing to the presence of a ruptured vesicle.

Dr. BAGOT asked how long a period of time had elapsed between the suspected rupture and the operation. He thought it was a case that shewed the danger of making vaginal examinations without antiseptic precautions.

Dr. FENWICK said three-and-half days.

Dr. BANTOCK said that rupture of an ovarian cyst was not an uncommon thing, but he had not met with a case in which such severe symptoms had followed its occurrence. He mentioned that some years ago he had ruptured a cyst in the course of his examination. The cyst occupied Douglas's pouch, and fibroids were also present and it was impossible to say which was fibroid and which cyst. It was in endeavouring to make this out that he felt something give way and

the tumour disappeared from the pelvis. He assumed that rupture had taken place, but the patient could not be operated upon until the following morning. When the abdomen was opened the contents escaped, being of a dark grumous character. He removed the cyst, washed out the cavity and drained, and the patient did well. Her temperature never went above 99°. In another case, the patient then residing in Canada, fell down stairs and burst an ovarian tumour. She had no symptoms of any particular moment, and soon after she was enabled to undertake the journey to this country. On removing the tumour it was quite easy to see where the rupture had been. It had healed up and the cyst was quietly refilling. There were no constitutional symptoms. That was particularly the case in rupture of colloid tumours, in which the rupture began as a pin hole. He was unable to explain how it was there had been so much disturbance in Dr. Smith's case. That was more frequently noticed in cases of rupture into the cyst, which was often associated with symptoms of strangulation. He did not gather that there had been any rupture into the cyst. He was not prepared to accept the statement that the symptoms were due to rupture into the peritoneal cavity. He did not think either that such a rent would heal up in three days.

Dr. BAGOT mentioned that the drainage of indifferent fluids into the peritoneal cavity did not usually give rise to constitutional disturbance. He mentioned that he had seen their President purposely open the Fallopian tubes in cases of hydrosalpinx and allow them to drain into the peritoneum without any bad results.

The PRESIDENT denied that the escape of indifferent fluids was likely to set up irritation, and he thought that tapping ovarian cysts sometimes resulted in their cure, because it left an opening through which the cyst drained its contents. He said he had operated in several cases of hydrosalpinx in the manner described and without drainage. He observed that blood was just such an indifferent fluid and the escape of blood was in his opinion no justification for

draining. Transfusion of blood into the peritoneum was even an excellent way of restoring a patient under certain circumstances. He said he had intended to bring forward a paper on that very subject and to ask them to give the indications for drainage.

Dr. R. T. SMITH said it was because the symptoms were unusual that he brought the case before the notice of the Society. After they had removed the tumour they found a small cyst the size of a pea that had burst and its contents were then oozing out. A fortnight before Dr. Fenwick had seen her she had had an attack which had alarmed her doctor.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, JANUARY 22, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : Fellows 22, Visitors 4.

The following were proposed for election :—C. F. Gray,
M.R.C.S., Newmarket ; E. T. Collins, Birmingham.

Mr. JESSETT read the following paper :

On the Surgical Treatment of Cancer of the Uterus. By
FRED. BOWREMAN JESSETT, F.R.C.S.Eng., Surgeon to
the Cancer Hospital.

GENTLEMEN,—In presenting the following observations to your notice, the result of some years' experience in the uterine wards of the Cancer Hospital, it is not my intention to weary you with a description of malignant disease as it attacks the uterus in all its different aspects, but it will, I think, facilitate discussion, and indeed be necessary, to describe briefly the position in which the disease is most frequently found, and for this purpose it will be more convenient to divide the uterus into three portions—the vaginal, the cervical, and the body.

Carcinoma, as it affects either of these parts, generally presents different characters, runs a different course, and may be treated by different forms of treatment. As Ruge, Vert, John Williams, Schroeder, Leopold, and others have pointed out, cancer rarely commences in the vaginal portion, although the disease very frequently is found involving it—indeed, in the majority of cases that come under our notice the vaginal mucous membrane of the uterus is involved, but the disease does not originate in it.

The point at which cancer of the cervix commences is in the cervical glands. Dr. J. Williams says he has seen no case originate in the epithelium of the surface, but it may begin in the glands close to the surface, or in the deeper portions of the glands.

The disease may commence in any part of the canal—by far the most frequent site being at the lower half.

The posterior lip is attacked more frequently apparently than the anterior, and it is of the utmost importance to remember that, no matter where or in what manner the disease originates, it, I believe, invariably extends downwards and outwards at first, although later it may grow in an upward direction. It will be observed, therefore, that true squamous celled epithelioma is of very rare occurrence, the form of cancer usually found being cylindroma or scirrhous, commencing in the glands of the cervical portion of the uterus.

Having thus cursorily alluded to these preliminary points, let me for one moment allude to the importance of early vaginal examination, both digital and by the speculum, of every woman over the age of twenty-five years who may consult you for pain, hæmorrhage, discharge, or any other discomfort connected with the uterine functions. I cannot emphasize too strongly the importance of this; as the chief—I may say the only—hope of successful treatment must depend on early recognition of the disease.

There is a pre-cancerous stage of cancer of the uterus, the same as there is in the tongue or throat, and it is the duty of the surgeon to endeavour to make himself familiar with this condition. That it is very much more difficult to distinguish this stage in the uterus there can be no doubt, from the simple fact that the disease, as I have already said, so frequently commences in the cervical portion or body of the organ; but yet, for the successful treatment of the disease, how important this is.

But I am not here to-night to go into the early diagnosis of the disease, but to discuss the treatment when present.

The treatment of uterine cancer may be divided, in the

first instance, into two groups—*Palliative* and *Radical*. The *Radical* may be sub-divided again into destruction of the disease by caustics, &c., and the partial or total removal of the uterus.

By *Palliative* treatment no doubt much may be done to relieve suffering, to arrest the rapid progress of the disease, and to improve the general health of the patient.

Thus a patient presents herself with the following condition present. Cachexia, loss of flesh, loss of appetite, a foetid sero-purulent discharge, often streaked with blood, occasional hæmorrhage and irritation of the bladder. Vaginal examination discloses a large ragged cavity lined with badly-smelling slough, irregular to the touch, bleeding readily, extending to the vaginal walls, and the whole of the remainder of the uterus firmly fixed to the surrounding structures.

How commonly do such cases present themselves to our notice, and how hopeless they appear, and yet even in these much may be done to alleviate suffering and to make life more bearable.

The vagina should, in the first instance be thoroughly syringed with sanitas or some other antiseptic lotion through a full-sized speculum; then, with pieces of cotton-wool, the cavity should be wiped out as far as possible, removing all *débris* and loose sloughs; a tampon of cotton-wool soaked in equal parts of pinus canadensis and glycerine, or smeared over with an ointment composed of one ounce of sanitas oil, ten grains of chloride of zinc, and an ounce of vaseline should be introduced into the cavity; this should be used night and morning, the vagina being syringed out each time and the cavity wiped with cotton-wool before the insertion of fresh tampons. By adopting this simple plan of treatment the sloughs become dislodged and a clean ulcerated surface exposed. All offensive smell will disappear, and the pain and the bladder irritation be much decreased. The disease will be considerably retarded in its growth, and the patient's appetite return, and her general health improved, doubtless owing to the non-absorption of the poisonous discharge.

Perfect rest should be insisted on, and the general health attended to by the administration of appropriate tonics ; and if pain is present and prevents sleep, small doses of morphia may be advantageously given.

I may say, in my hands, no drug administered has had the slightest effect in arresting the growth of the disease. I have tried all those that have been reputed to have cured the disease, and given them all a fair and honest trial, but have abandoned them—as useless.

By adopting the plan of treatment above described, I have in a number of extreme cases afforded considerable relief, and many patients have left the hospital improved in general health.

With regard to the attempts to effect a radical cure, this can only be hoped for when the disease is seen tolerably early, the uterus freely moveable, and the vaginal walls not implicated. The locality and extent of disease must be thoroughly defined.

If the disease is limited to the vaginal portion of the uterus it may be attacked by caustics, the cautery, or the neck of the uterus may be removed by the ecraseur or scissors.

Caustics I will only mention to pass by, as I consider them uncertain in their action, and unreliable, as it is difficult to tell to what depth their caustic action will extend, and unless applied very freely they do far more harm than good. They often cause considerable pain, and require to be repeated over and over again to the great distress of the patient.

The cautery can either be applied in the form of Paquelin's or the galvanic cautery. In cases in which the disease is limited, this form of removal of disease possesses decided advantages, as by drawing the uterus well down, the disease can be removed very thoroughly, and by the cautery action on the stump a considerable slough is formed which materially adds to the favourable result to be expected. All bleeding during the operation is also avoided.

Galvano-cautery may be applied by passing one electrode

into the cervical canal and the other needle deeply into the diseased tissues over and over again around the os, thus destroying parts to any depth required. This method has a further advantage, that the electrode passing into the canal will destroy any growth that may be hidden there. Allow me to point out here that the action of the galvano-cautery as above described, is by direct cautery action. I applied it at first in this manner to see if any results would be obtained by destruction of the cancer cells without cautery action, but found that in these soft tissues invariably the result was necrosis of the tissues—large sloughs coming away afterwards. The same results were obtained in applying this form of treatment to cancer of the breast. Wherever the needles passed there was a line of necrosis of the tissues due to direct caustic action—that is, when the strength of the current could be raised sufficiently high for the purpose, viz., from 400 to 600 milliampères. This was proved in cases in which I adopted the treatment in scirrhus of the breast, and subsequently amputated the breast.

The Ecraseur.—Either wire or electric is another method adopted for removing the diseased vaginal portion of the uterus. The advocates of this method of treatment claim for it that it is a bloodless operation, and from the contusion of the tissues a considerable slough comes away afterwards, this no doubt is the case; but I would ask, is this instrument free from danger? I think not, as it cannot easily be applied unless the uterus is very moveable and readily drawn out of the vulva, and then it is difficult to know in what relation the wire may be to the peritoneal folds, both before and behind the uterus, the bladder and ureters. The latter have in some cases been caught in the loop, and, as Marion Sims has well pointed out, except with extreme care irreparable mischief may be caused by the use of these instruments.

Amputation of the cervix by means of scissors.—That the whole of the disease when limited to the vaginal portion of the uterus may be easily and safely removed by this means without risk to any of the surrounding parts is undeniable.

The surgeon can see what he is cutting and has complete control over his instrument.

Some surgeons place their patients on their side on the operating table with the buttocks well over the edge. I prefer having the patient placed in the lithotomy position, and kept so by means of Clover's crutch, the buttocks then drawn over the end of the table, and the vagina syringed out with perchloride of mercury solution. A duckbilled speculum is introduced and held in position by an assistant. The uterus is then seized and drawn down as far as possible, by passing a long sharp hook deeply into the canal or by means of a pair of strong vulsellum forceps. The vaginal mucous membrane is then divided around the neck, well clear of the disease, and then with the finger or some blunt instrument this is stripped back, and the neck of the uterus above the external opening, or as much higher as necessary, cut across.

Before dividing the parts completely across, it is well to pass a sharp hook or vulsellum forceps into the stump to prevent it retracting, in case there should be any bleeding point that requires tying or touching with the cautery. The diseased portion being removed the stump and the canal should be examined carefully to see if there is any disease remaining, and if such is found to be the case, it will be necessary either to burn it with the cautery or cut out a pyramidal piece, as will be described in dealing with the disease when situated in the cervical portion of the uterus.

This brings us to the treatment of the disease when it attacks the cervical portion of the uterus, and here, in my opinion, there are only two methods of treatment to be adopted—viz, total extirpation of the organ or removal of a deep wedged-shaped piece by supra-vaginal amputation of the cervix.

First, with regard to vaginal hysterectomy, I have seen and assisted my friend and colleague, Dr. Purcell, in several of these operations, and admirably he has performed them, and with wonderfully good results. It appears to me, how-

ever, most hazardous leaving such a large opening into the peritoneal cavity with a large drainage tube, perhaps packed round with antiseptic wool or gauze tampons ; or perchance two or three pairs of large pressure forceps hanging out of the vagina in cases where there has been difficulty or perhaps impossibility of arresting deeply-seated hæmorrhage in any other way, and yet the majority of these cases did well. Then, again, by studying the statistics of Professor Leopold of Dresden, who has lately published the result of eighty cases of vaginal hysterectomy for cancer, of which only four died ; in two of these the disease had extended so far as to make the task hopeless. These results are so encouraging that one cannot but look forward to the day when this proceeding will become the recognised operation for all cases of cancer of the uterus in which the disease cannot be removed in any other way. But still I am always impressed with the difficulties of the operation, and cannot at present bring myself to adopt this mode of treatment. We must not be satisfied only with being able to perform the operation successfully. That undoubtedly is the first point, and by adopting the method proposed by Schroeder and modified by Professor Leopold and Dr. Sinclair, I think there is no very great risk in the operation itself provided the uterus, be freely moveable ; but we must consider in what percentage of cases a radical cure was effected, and here, by examining Professor Leopold's cases, he says forty-two had been operated on for over two years ; of these twenty-seven were still free from the disease, equalling 64.5 per cent. If gentlemen, these figures are reliable, and the whole of these forty-two cases were proved to be malignant, this must of necessity be a strong argument in favour of vaginal extirpation of the uterus in certain cases.

Professor Leopold's statistics do not, however, tally with those collected by Dr. W. Duncan. In a paper communicated to the Obstetrical Society on Extirpation of the Uterus in certain cases of Cancer, Dr. Wm. Duncan has collected from various authorities the particulars of a long series of these

operations; 137 of which were by the abdominal method with 99 deaths, being a death-rate of 72 per cent. and 276 were cases of vaginal extirpation with 79 deaths, being a death-rate of 28.6 per cent. Later statistics, however, tend to corroborate Professor Leopold's report, and I should therefore advocate this operation in all cases where the uterus is moveable and not suitable for supra-vaginal amputation.

Failing this operation, the question naturally arises, what else can be done? Are we to leave the patient to her fate, or what? Of course, there is the resource to abdominal hysterectomy by Freund's operation, but this, in my opinion, is totally unjustifiable. The mortality after it is so large that I certainly should recommend no patient of mine to undergo it.

Dr. John Williams described in the Harveian lecture in 1887, a method of operating which, although not new, I do not find recorded anywhere to the extent he proposed. He asserted that there was but little difficulty in cutting away the greater part of the uterine tissues without opening the peritoneum at all.

The operation is performed much in the same way as ordinary amputation of the cervix. The patient is kept in lithotomy position by means of Clover's crutch, and the uterus drawn down either by the sharp hook or strong vulsellum forceps, a duckbilled speculum being passed to keep the posterior wall of the vagina out of the way. A sound is now passed into the bladder and retained. The mucous membrane of the vagina is snipped round with blunt pointed scissors bent on the flat, and the vaginal mucous membrane and tissues beneath are pushed up as far as possible. Then by short snips with the scissors into the uterine tissues and constantly pushing back the divided structures either with your finger or some blunt instrument, and having firm traction made upon the part to be removed by means of the vulsellum forceps, it is quite easy to cut away the uterine tissues as high as you wish, even to the fundus; the most difficult part to pass is that just at the internal os, where the uterus is somewhat contracted.

Before removing the mass to be taken away it is necessary to seize the remaining portion of the uterus to prevent retraction, and to stop all bleeding, either by ligature, cautery or perchloride of iron.

It may so happen that the disease extends along the posterior lip so high as to oblige you to open Douglas's pouch or the fold of periosteum between the bladder and uterus. This I have done in two cases, but I think there is nothing to be feared from this.

All bleeding being arrested, and the parts thoroughly syringed out with perchloride of mercury solution, the cavity left in the uterus, which, by the way, contracts in a remarkable manner, should be plugged with antiseptic tampons and also the vagina. A little care in introducing these is desirable, and that is to tie knots in the string attached to the plugs according to the order in which they are inserted. By adopting this plan, much time and trouble will be saved to the operator, and pain to the patient.

The after-treatment consists in removing the tampons the next day, and syringing the vagina out daily, or twice a day, with some antiseptic lotion, I prefer a solution of iodine, through a full sized speculum, care being taken to wipe away any blood clots that may have collected.

One trouble that is sometimes experienced in dressing the stump is that the posterior wall of the vagina has a tendency to drop downwards and forwards, thus preventing free escape of the discharge. This can be easily guarded against, by passing one or two full-sized tampons through the speculum by means of the long uterine forceps, while the stump is dusted with iodoform, and one or two tampons dusted with iodoform lightly inserted.

I have now performed this operation several times, and in every case the patients have convalesced quickly and well. The two cases which have been done the longest time, viz., slightly over 12 months—are now quite well, and have had no recurrence.

All the patients have considerably improved in health and

strength, and have gained weight. (Since writing this, one patient has returned to me with a recurrence. This was a bad case in which the vaginal mucous membrane was implicated.)

In the eight cases appended to this paper, the ages of the patients varied from 36 to 65 years, and the disease in every case implicated the cervical canal, and in some of the cases the vaginal mucous membrane was affected. In one case I succeeded in snipping out the disease, which extended over the whole interior of the uterus as high as the fundus.

The malignant character of the growth was in every case verified by the microscope.

Finally, a few words respecting the treatment of cancer of the body of the uterus. The correct diagnosis of this disease in its early stage is most difficult; in fact, I believe in many cases it is impossible, without one is able to remove a small piece with the curette or cutting forceps for microscopic examination.

The only treatment that can be adopted with any chance of success is extirpation of the uterus either by the vagina or by abdominal section; although I have undoubtedly prolonged life considerably in some cases by adopting the less formidable operation of scraping out as much of the disease as possible with a full-sized Volkman spoon, and then applying chloride of zinc to the surface freely or the actual cautery, dressing the parts afterwards in the same manner as I have already described under the head of palliative treatment.

The disease when commencing in the body of the uterus is so liable to extend to the ovaries and Fallopian tubes, and recurrence is to be anticipated according to Sanger on an average of four months, that I do not think vaginal extirpation should be resorted to excepting in the most favourable cases when there is a probability that the disease may be perfectly removed.

The conclusion that I have arrived at, and on which I would invite discussion and criticism to-night, may be summarised as follows :—

1. That carcinoma, when attacking the vaginal portion of the uterus is best treated by amputation of the cervix, and that this operation should be performed with scissors in preference to the ecraseur or cautery.

2. Caustics in this or any other form of the disease are unreliable, and indeed in many cases harmful.

3. That cancer of the cervical portion of the canal should be removed by cutting away a conical portion of the uterus beyond the disease in the manner described; but if on removing this the disease is found to extend higher, then total extirpation of the organ by the vagina may be practised. That removal of the cervix by the ecraseur in this form of the disease is inadmissible.

4. When the body of the uterus is the seat of the disease, if recognised early enough, extirpation of the entire organ should be practised; in the more advanced stages much may be done by adopting palliative measures, as described.

5. No drugs administered internally have any effect whatever in arresting the disease.

Cases in which disease was removed by scissors, together with a conical supra-vaginal amputation of part of the uterine tissues above.

No.	Age.	Part affected.	Vaginal Mucous Membrane affected.	Result.
1	65	Vaginal and Cervical	No.	Cured.
2	62	" "	No.	Cured.
3	36	" "	No.	Cured.
4	44	" "	No.	Cured.
5	42	" "	Yes, posteriorly.	Cured. Recurred in 6 ms.
6	55	Fungatory mass.	Yes.	Cured.
7	35	Vaginal and Cervical	No.	Cured.
8	52	Body and Cervix has been operated on twice before.	Slightly, Uterus moveable.	The whole of interior of uterus was cut away with scissors. The peritoneum anteriorly was opened. Patient did well.

Dr. EDIS said he was sorry that Mr. Jessett had not taken up the question of the early diagnosis of malignant disease, for that was the very essence of the matter. The paper would have been more complete had he even in the briefest way explained the symptoms which he would hold to justify the diagnosis in these cases. He mentioned that in many of the cases which were operated on on the Continent the diagnosis of malignancy had not been confirmed by subsequent examination. He hoped that the dissemination of gynæcological knowledge among general practitioners would have for effect to induce women to ask their assistance before the disease had proceeded so far as to be beyond the reach of operation. He pointed out that neither hæmorrhage nor pain were invariably present in these cases, and if hæmorrhage were present it was not necessarily diagnostic of malignant disease. He mentioned the case of an elderly lady who had not seen a trace of sanguineous discharge for nearly twenty years. The hymen, too, was intact, but when he examined her the tissues broke down, giving rise to what might have proved severe hæmorrhage, and she proved to be suffering from advanced malignant disease. He insisted upon the fact that success in these cases was inseparable from early diagnosis, and he asked what was the best way to operate when the disease did not extend far up the cervical canal. He himself had tried every way, and on the whole he preferred to use Paquelin's cautery, pulling the uterus well down and shielding the surrounding parts. By this means he had been fairly successful in a number of cases. In one case there had been no recurrence for six years. He preferred the scissors to the knife, as there was much less tendency to hæmorrhage, especially if the scissors were curved on the flat. The question of total extirpation of the uterus was hardly comprised in the paper, and was in any case so large a question that it had better be left aside on that occasion.

Dr. HEYWOOD SMITH agreed that early diagnosis was the important question, and he thought that teachers in the medical schools should be induced to impress upon the

students their absolute moral right to insist upon an examination in cases of a suspicious nature. It was, however, little good for men to be taught to make these examinations unless they were acquainted with the means of arriving at an early diagnosis of malignant disease. With regard to what had been said as to the pre-cancerous condition of the cervix, he said there were certain cases of incipient granular disease of the cervix which if neglected, went on to coarser granulation, and so on by imperceptible degrees into epithelioma. He concurred in the view that the actual cautery was often a useful method of treatment, but he pointed out that if used at a white heat the charring of the tissues which took place prevented the further destruction of the tissues to the depth required, unless they waited for the sloughs to come away and then repeated the operation. He thought that in this respect potassa fusa was better, though he admitted it required to be used cautiously in order to avoid accidents. The operation might be completed at one sitting by the use of this powerful agent. He also thought that Marion Sims' method of using chloride of zinc was a good one, and he had seen cases treated in this way many years ago without any recurrence of the disease.

Dr. TRAVERS thought that teachers ought to imbue their students with the necessity for the abolition of the expression "change of life." Such a step would do more to bring about the early diagnosis of malignant disease than anything else. He mentioned nine cases of advanced carcinomatous disease, in which the patient had been put off with the assurance that the symptoms were due to "change of life" until it was too late for anything to be done. He would like to see the word expunged from their vocabulary. In reference to the use of the galvano-cautery he said that when they had to do with a large bulky growth of the cervix the cautery was useful to remove the part lowest down. He did not think that there was any special danger of opening the peritoneal cavity by its use.

On the motion of Dr. R. T. SMITH the discussion was adjourned until the next meeting.

The PRESIDENT then delivered the following inaugural address :—

The Aims and Progress of Gynæcology.

GENTLEMEN,—In some observations recently made before this assembly I said we were a “progressive Society,” and I do believe that the *raison-d'être* of this Society is because the desire of progress in all knowledge which bears a relation to gynæcology is the paramount motive we have all at heart. Indeed, this society was called into existence because diseases of women were not only insufficiently studied, but imperfectly understood—and no wonder. For many years back those who practised gynæcology had been made painfully aware that they were thought to hold an inferior position in the profession. The very specialism of midwifery and diseases of women was looked down upon, and the Royal Colleges, even in modern times, did not examine candidates in these subjects for their licences. Midwifery at last came to be regarded as something it was well to understand better, when it was found the Sovereign required the services of accoucheurs, but it was scarcely seven years ago when diseases of women were first deemed a subject for a pass examination. The University of London formed a bright exception to this anathema. We must also admit that the Obstetrical Society of London did the profession good service in two ways—First by its establishment and subsequent success. But it neither has nor could do enough to meet the full exigencies required. It was this want which called this Society into existence, a want still felt, since within a very few weeks back we have seen it has been thought necessary to establish another Gynæcological Society for the northern counties of England. Secondly, the Obstetrical Society of London can boast of having initiated a practice which is calculated to improve greatly the value of their *Transactions*, namely, to publish also with their papers the discussions on them. Thus errors made may be exposed, opinions of men of talent and ex-

perience preserved to posterity, such opinions being often more important and practical than the papers themselves, and truth comes out in fuller light in the conflict of debate. For knowledge to be a branch of science must be based upon demonstration. It is in reality a divine attribute which man should use; but because it has this origin, it must be true and employed for the glory of its Creator and the happiness of man. If knowledge be defective—if it be not founded as I have defined it—it must fall short of its intentionality, and as such be productive of harm rather than good.

It must also be destructive of all self-opiniated declarations which do not by their evident truth completely overpower opposition, and master the will, by a conviction which cannot be set aside. These, I believe, are the influences that should be, and are at work in a Society like ours, and so develop, as it were, towards the cure and relief of those diseases we profess to treat, an engine of power. But, again, for the very reason that men must be progressive, it is important that the rudiments, if I may so term them, on which science is erected be not ignored. The foundations of a structure must be strong and well-established. Man must be the helpless babe ere he becomes a boy, and a boy before a youth and a youth before he becomes a perfect man. Babes, young men, and fathers in wisdom are successive grades of advancement. For this reason the labours of those who have gone before should not be neglected. The steps of the ladder, the grades up the mountain must be necessarily trod ere we reach the peak. Experienced teachers are needed as guides to point out the proper paths—and there may be *many* paths, and only a *good* guide can discern them. So I believe that every gynæcologist who expects to be right in his diagnosis, and a successful practitioner, must not only have *seen* many operations, but be an operator himself. Many most useful records of gynæcology are to be found in some of our oldest writers. If they had not all our appliances, they were quite as painstaking and careful as observers. Had we not neglected to consult them, gynæcology would not have been so backward

and forgotten as it was at the beginning of this century. Their writings often suggest excellently well, points of diagnosis, and have pre-indicated many of the so-called new operations of our day.

My late colleague, Dr. H. G. Wright, of the Samaritan Hospital, published years ago (*Br. and Fr. Review*, II., 1865, p. 178), a paper on the early history of Uterine Pathology, and he there mentions, among many others, the works of Aetius on the diseases of women. Thirty-seven chapters in them treat of pregnancy, parturition, and suckling; six on various forms of ulceration of the womb; three on abscesses; two on displacements; two on obstructed and imperforate uterus; seven on growths occurring in the vagina or uterus; and eighteen on menstruation and its disorders. He describes hysteria, fibrous tumours, pelvic abscesses, and hæmatoma, and devotes a long chapter to *metritis*. He used the speculum in these enquiries for the diagnosis and treatment of ulcerations, polypi in the neck of the uterus, sessile growths in the same situation, calculi, hæmorrhoids of the womb, of imperforate uterus and abscess. Digital examination is also insisted upon. Medicated pessaries and purgatives are also fully described. He flourished end of 5th to beginning of 6th century.

Jacobus Primerosus, by birth a Scotchman, studied in Paris, graduated at Oxford, and practised at Hull, and his work, "*De Morbis Mulierum*," published in 1665, at Rotterdam, proves that he was experienced and well informed above his day among gynæcologists. His principal authorities are Hippocrates, Galen, and Aetius. His book includes sixty-one chapters. He used the speculum, and gave full directions as to its employment in the investigation of uterine disease. He gave hygienic directions worthy of a better age, and described many of the functional diseases of the uterus. But again, it is equally evident that those who wish to acquire proficiency in any particular department must also attend those hospitals where the larger number of cases he is investigating are treated. Hence the need of special hospitals for

their special study. For, as in building a house, the architect may supervise and circumspect all from a general knowledge, but he needs the mason, the carpenter, the plumber, the glazier, the roof maker, the ironmonger, bell hanger, and so on; each must be in his proper place. So it must be in medical science. Only of late years do general hospitals appear to have learnt this lesson, by instituting special departments, but not until hospitals and dispensaries for consumption, for diseases of women peculiar to their sex, then of the ear, throat, and skin, broke forth into life to keep pace with the demand for more knowledge. Notably, because specialism taken up by those who had special tastes, soon brought out new methods of treatment, with lower mortality and more cures, and these to an extent never before attained, proving unmistakeably that the calibre of those men's minds who could treat special diseases was as powerful, if not more so, than that of the so-called pures, spite of their assumed superiority, and so-called exclusive amenities.

But let me now refer a little to this progress and trace its course and the lessons which it teaches us for the future, and this I think I can best do by referring to the changes which I have noted, and which have taken place during my practice in this city. But I cannot speak of all. Time will only allow me to speak of a few of these.

When first I was made obstetric physician's assistant at University College, under no less a distinguished professor than the late Dr. Murphy, who came to us with all the lustre of Irish knowledge, to which, in obstetric practice at least, was adjudged the pre-eminence in those days, the comprehension and practice of diseases of women was at a very low ebb in England. Indeed, the *armoraria* of that department were ridiculously inadequate—one or two specula, a four-valved silver speculum included, a pair of forceps, a sound, a scarificator, and a piece of lunar caustic, with a table for examination, were almost their totality. It was not deemed decent to examine women before the students as a body. One or two privileged persons, including the senior physician's assistant

(and later on a junior assistant) were allowed to be present, and I remember a dispute occurring because the house surgeon had presumed to use one of the obstetric specula, lest perchance he might disease specifically the small number of women we examined, at most half a dozen, seldom more than two or three. There were no special wards for diseases of women peculiar to their sex. The very use of the speculum was considered immoral, an instrument to be used only *as a pis aller*. Dr. Henry Bennett, who appeared amongst us in 1845, was for a time a shining light. He had arrived in this city endued with all the gynæcological knowledge French doctors had cultivated, but which we had despised. He had written on diseases ignored, if not unknown in England. He therefore used regularly the speculum. The profession was offended and alarmed. Nor was it long before Dr. Robert Lee, himself among the most distinguished obstetricians of the day, unable to restrain his indignation longer, wrote a remarkable paper, still extant, in the *Medico-Chirurgical Transactions* (vol. lxiii), "On the use of the Speculum" (p. 263). In that paper, after describing a few of the various instruments used of old, he expatiates on the utter uselessness of the speculum in several diseases of the uterus:—"An examination of the physical condition of the uterus in unmarried women either with or without the speculum I have always refused to make, even when requested to do so, unless pain, and almost constant, in the region of the uterus existed, leucorrhœa or hæmorrhage, which did not yield to treatment, and where the symptoms did not make me strongly suspect the presence of some displacement or organic disease." "Even in married women who are barren, or who have had children, it is unjustifiable on the grounds of propriety and morality to institute an examination of any sort unless the symptoms warrant the supposition that the uterus is displaced or in a morbid condition, the nature of which cannot be determined by the symptoms alone." The peroration of that paper concludes with the account of a useless and barbarous outrage committed on a lady in his presence by a gynæcolo-

gist, and which caused her death, and in whom the *post-mortem* made, "revealed no uterine disease whatever."

I find it difficult to believe that so good a man as Dr. Lee could have been present, as he states there he was, before such barbarity for an hour. Still less that any English physician could have acted so cruelly. I receive, therefore, the account *cum grano salis*. Dr. Lee was a very great man, but must have been of a very sensitive nature. When he could hold up in the Society a uterine sound, and show it as an instrument capable of frightening a Caffre, this sensitiveness is apparent, and the exquisite tenderness of heart must have, I fear, sometimes misled his better judgment.

Nor did he stop there. When *ovariotomy* came into vogue, and had been practised by Dr. Clay, in Manchester, and Dr. Bird, in London, we were favoured with another marvellous paper on that operation (*Medico-Chirurgical Transactions*, vol. 34, p. 10). It begins with the account of one favourable case by Dr. Nathan Smith, then follow three terrible cases of bad diagnosis, operated upon by Lizars, of Edinburgh, in 1823. The first was a case of obesity, no ovarian tumour. A second by the same operator, where both ovaries were diseased, one only was removed, but the patient recovered. In the third, only a vascular tumour was found and could not be removed. In 1826 and 1827, two cases were operated on by Dr. Granville; in the first of which the tumour could not be removed, in the second in which there was no ovarian tumour found to remove. Then follows a table of 162 cases in which the operation was undertaken. In 60 the ovarian disease could not be removed, with 19 deaths, or 31 per cent. Of the remaining 102 in which the operation was completed, 42 died, or 41·1 per cent., or together 37·6.

It is remarkable in that list, that he seems to think the greatest fault was committed, because hysterectomy was in five of the cases performed, the tumour not being ovarian, but a fibrous tumour of the womb, while in one there was no tumour whatever found. Among these five the deaths were

four. To me at the most the lesson these cases teach is, that the powers of diagnosis in women's diseases in his time were at a very low ebb, *due* no doubt to the entire neglect of their study and observation, by those whose duty it was to have taught their pupils better things.

I believe that in London the first impulse to gynæcological surgery was given by the late Baker Brown by whose exertions, with others, St. Mary's Hospital was founded. He was a man of great energy, and as an operator in diseases of women eminently skilful. It was quite a pleasure to see that surgeon handle the knife, at least in his palmy days, and his success was very great. At the zenith of his career he was making his £1,000 a month easily. His first experiences in ovariectomy at St. Mary's Hospital were like those of all operators in new operations, if they would only admit it, unfortunate, but although he had but six beds at his disposal, those who saw him operate, and were unfettered by prejudice or jealousy, could foresee a coming master in female surgery. His first ill successes, however, brought him into collision with his colleagues, and this it was that led to his resignation from that hospital in 1858, and to the establishment of his Medical Home at Notting Hill. Here every operation practicable on women was performed by him, and with a success unequalled at first in any other hospital. Here men from every part of England and the Continent flocked to see his success, and it is not far from the truth to say that many gynæcologists learnt lessons there, which they put in practice at a later stage, and which was the origin of their success. Isolation of cases in separate and well-ventilated rooms enabled him to obtain results, which at St. Mary's were impossible. This indeed was so fully recognised by Dr. Tyler Smith, his former colleague, that a separate department was instituted in St. Mary's, and enabled Dr. T. Smith also to obtain an enviable success. I have said in ovariectomy Mr. Baker Brown obtained great success. But he did not stop there. In cases of fistula of the bladder he rivalled Bozemann, Sims, and Emmett. Perineal cases were remedied by the

score. Some cases of fibroids by his gouging process were cured rapidly and effectually. I think that if more care had been observed in these last operations by the freer use of antiseptics, the septicæmia, which supervened and caused the death of many of those patients, would have greatly diminished.

I pass over very many of the operations he taught some of us to perform. I will not speak of his mistake in clitoridectomy cases. We all know now what at that time we failed to perceive, that his mind was beginning to fail, hastened by misfortune and persecution. The *post-mortem* made by Dr. Barratt in my presence, demonstrated the existence of old and recent brain disease. This proved he was not then responsible. But if Baker Brown's melodrama attracted most observation we must remember the fallow ground had already been broken up, and prepared by other special hospitals for women. The Soho Hospital for Women, founded by Dr. Protheroe Smith, in 1842. The Samaritan Free Hospital, by Dr. Henry Savage, in 1847. The Chelsea Hospital in 1871, had, and have all been working in the same direction. In the Samaritan, Spencer Wells, like Baker Brown, as an ovariologist was at one time unequalled in the number of his cases and his successes. It was also his good fortune, both for the advantage of the profession as well as the Samaritan Hospital, that he was Editor of the *Medical Times and Gazette*, and so could publish without fear of extraneous cliquism, and in the face of all opposition of general hospitals, the whole truth, and show forth the comparative and lesser mortality of such capital operations in special hospitals. Lessons which our American cousins had proved for themselves also, and in which Manchester, Birmingham, and Edinburgh, in Great Britain have followed suit in producing some among the best operators in the world. But what is the opinion of ovariectomy at present. Spite of all Robert Lee's indignation and opposition, if it is to be admitted as a general fact that all operators at first are less successful than afterwards, when they have more experience and have profited by the mistakes and

the directions of others, ovariectomy is now an established operation everywhere. Dr. Clay had in Manchester in his first series a mortality of 40 per cent. In his second series, one of 30 per cent. In his last, one of 25 per cent., and so it was with Baker Brown. Of his first 50 cases he lost 24, or 48 per cent. Of 70 cases commencing in January, 1863, he lost 11, or 15·7, 59 *recovering* or 84·3, the last 19 of his cases were all successful. He used the actual cautery to separate the pedicle in his 67th operation. His last 53 were so treated with 5 deaths, *i.e.*, 9·4 per cent., 91·6 per cent. *recovering*.

Sir Spencer Wells in 10 series of 100 cases each, obtained the following results (*Medico-Chirurgical Society Transactions*, vol. 64) :—

In the 1st (100)	...	34	In the 6th (100)	...	28
" 2nd "	...	28	" 7th "	...	24
" 3rd "	...	23	" 8th "	...	24
" 4th "	...	22	" 9th "	...	17
" 5th "	...	20	" 10th "	...	11

Mr. Thornton (vol. 70, p. 44) :—

In the 1st (150) his mortality was 10 per cent.

" 2nd "	"	"	7·33	"
" 3rd "	"	"	6·66	"

Dr. Bantock in 400 cases (*Medical Press and Circular* November 13th, 1889) :—

In the 1st (100) his mortality was 19 per cent.

" 2nd "	"	"	14	"
" 3rd "	"	"	8	"
" 4th "	"	"	4	"

Mr. Lawson Tait in a paper relating his experience in 1,000 cases of consecutive abdominal section (*British Medical Journal*, ii. 1888, p. 1,096), gives the following data :—

			Deaths.	Mortality per cent.	Mortality of previous years.
Cystoma parovarian	...	24	1		
Of one ovary	...	158	6		
Of both ovaries	...	78	2	3·3	8·1
Enucleation of broad ligament	12	0			

To Mr. Lawson Tait we must, therefore, award the palm of the highest success. Without presuming to assign the exact

explanations given by the several operators, in which the operators themselves are in direct opposition to one another in their views, I think two conclusions must be admitted by all. (1) As they become more experienced operators, their success is greater. (2) Those that follow having become cognizant of the dangerous shoals, signalised, and warned against by those who have gone before, are able to navigate more successfully amid the hidden creeks, which might have destroyed their progress.

Porro's Operation.

The immense advantage of this operation in many cases is the triumph of the present age. Fortunately for me, in a very able paper by Dr. Harris, of Philadelphia, the merits of both, of Porro's operation and Cæsarian section, have been so fully detailed that I need only sum up his conclusions (*Brit. Med. Jour.*, March, 1889, and Jan. 7th, 1890). Out of 264 women, 117 died from the operation, divided as follows:—74 out of the first half, or 56 per cent., and 43 out of the second half, or 33 per cent., showing that a mortality has diminished from 56 per cent. to 33 per cent. And the same with regard to Cæsarian section. Out of the first 20 cases operated upon in all countries, there were 9 deaths, or 45 per cent. Out of the second 20, there were 6, or 30 per cent. Out of the last 40 in 1888, only 6 or 15 per cent.

Extirpation of Uterus per Vaginam.

Extirpation of the uterus per vaginam, was a subject upon which it was my intention to have alluded, as an evidence of another great improvement in gynæcology. It has been successfully practised by many of our Fellows. The subject has, however, been so ably discussed and brought before this Society by my honoured and distinguished predecessor in this chair, Dr. Macan, who so graphically and tersely explained to us the entire procedure, backed by the experience of Dr. and Prof. Leopold, Director of the Dresden Konigl. Frauen Klinik,

and who operated in this manner on 110 cases with a mortality of only 5.55 per cent., that my doing so again would be a work of presumption and supererogation. I shall content myself with reminding you that Astruc seemed also to have in 1761-66 foreshadowed this operation. He had recommended it strongly in cases of complete prolapse of the bladder, and gives definite directions how the steps of the operation should be carried out in a manner which would not be unworthy of some of ourselves. "I will even add more," says he, "that it has been necessary sometimes to proceed to the extirpation of the womb, by reason of the sufferings of the patients, even more than by fear of the imminent danger of gangrene, and that after removal, a subsequent dissection has proved that the entire uterus had been removed." Indeed he reports a case of Paré's (Lib. 24, ch. 48), in which this was done, and when some months after she died from pleurisy, a *post-mortem* demonstrated that the uterus had been completely removed and closed at the vaginal end, by a solid and callous body which replaced it (Astruc iv., 3 and 4), and Jacobus Primerosus, in his "De Muliebrium Morbis," speaking of prolapse remarks, If indeed the part which has come down, is threatened with gangrene, Paulus Aetius, and several Greeks have advised amputation. They teach that the uterus may thus be removed without danger by many examples. Ros-situs (in his book on Cæsarean section). Platerus (Lib. iii. 718) also narrates eloquently the history of a lady whose (corruptus) sloughing uterus was removed, and yet continued to menstruate regularly from the stump thereof. (Primerosus, Liber. ii., p. 154.) These instances are remarkable because the first step of extirpation of the uterus in the present day is by pulling it down forcibly, so to imitate uterine prolapse. Astruc was a remarkable man, but Primerosus, who published his book in Rotterdam in 1665, was scarcely less so. His works include five books, sixteen on menstruation and its diseases, twenty-six on ulcerations, inflammations, cancers, fistulæ of the uterus, thirty-six on functional diseases of the organ, besides a fourth on pregnancy and its allied anomalies, and a fifth on lactation.

On Removal of the Fallopian Tubes.

I now come to speak of diseases of the Fallopian tubes, and the great discoveries made in their treatment with which the names of Mr. Lawson Tait in England, and Hegar in Germany, are so honourably associated. It is not that the diseases themselves are described now for the first time. In that storehouse of gynaecological science, Dr. Barnes's "Diseases of Women," in Thomas's "Diseases of Women," and in very many other class text works of years past, they have been described over and over again, whilst others have mentioned remarkable examples, and their history is to be found in most gynaecological books. If some of our teachers had been a little less wedded to their prejudices, and a little better acquainted with the olden literature which they despised, they might have done more good to the female kind. Even a hundred years ago (1761) it is remarkable that Astruc, in his "*Maladies des Femmes*," described most of the diseases to which the Fallopian tubes are subject. Inflammation, abscess and gangrene, closure and dilatation, Fallopian pregnancy, atheroma, shortening, adhesions to ovary, &c. But he admits also what most admit too, the equivocal character of the diagnosis. He distinctly advises puncture when it can be safely done, as recommended by a Danish physician, Dr. J. H. Bretchfeld, and a partial Cæsarian section in case of tubal pregnancy. Speaking of this last method, he says:—"From the moment we have recognised this condition, it is to be remedied by the performance of the Cæsarian operation, on the side in which the child is placed, and the more so as in this case operation, in which all we should have to do is to excise the tube, would be less dangerous than if it were necessary to incise the womb. These reasons appear to me to be so strong that unless the condition of the patient is such as to offer an obstacle, I think we are bound to follow out this practice; the more so as it is authorised by a celebrated case, that of Abraham Cyrianus, Professor of Anatomy and Surgery in the Academy of Franeguer, and reported in a dissertation (in

Latin) entitled "a letter narrating a case where a human foetus was extracted from a uterine tube," and addressed to Dr. Thomas Millington, President of the Royal College of Physicians of London.

Here we have section of the tubes distinctly recommended and as if it were a forecast of the operation recommended for ectopic gestation, and now admitted by most gynaecologists to be one of the proper operations to be performed, at any rate once the diagnosis of ectopic gestation is made. Unfortunately, even with our better appliances, this is not always practicable till rupture occurs, except in a few rare cases, and almost impossible when we have to do with a fat patient. Mr. Lawson Tait in many cases published in our JOURNAL proves the corollary. His opinion is clearly that except after rupture only is diagnosis possible. (Part 14, p. 182 ; see also Part 11, p. 418, Cases 28-33, p. 422. BRITISH GYNÆCOLOGICAL JOURNAL.) Although he modifies his opinion later on, and concludes that a correct diagnosis may be made in 85 per cent. of the cases, I would not dare make that statement, but if so, after the numerous experiments made in America and elsewhere, it is an argument in favour of using electrolysis first to destroy the ovum, or some of those other measures which experience has confirmed. The diagnosis, however, between the several conditions likely to be confounded with it, forms no part of my programme, although I think Mr. J. W. Taylor, the Surgeon to the Birmingham and Midland Hospital for Women, has given the very best advice I have yet seen for the differential diagnosis (*British Medical Journal*, March 27th, 1886).

Closely connected with this subject is that of the case of pyosalpinx associated with pregnancy, and which were shown to be more often, than generally believed, the cause of puerperal peritonitis. Dr. Grigg's excellent paper on this subject is all important, because the cases reported are fully and graphically recorded. Yet even similar cases had been fully discussed by other gynaecologists of eminence, notably Dr. Robert Barnes, who had (in *Lancet*, December 14th, 1861) described a case of pyosalpinx, the first recorded in England,

in which abortion was induced in a girl, and where death took place from peritonitis, due to the escape of pus into the cavity of the peritoneum. Martin, in 1859 (Report, *British and Foreign Medical Review*, vol. 23, p. 556), related five fatal cases of pyosalpingitis in primipara, who died from peritonitis from a similar escape of pus into the peritoneum during labour. The misfortune is, patients in such cases do not apply for examination, and therefore are still less likely than the former to be diagnosed before labour, especially in primipara, but even if they were, amidst the great necessary uncertainty, he would be a bold man who would operate before labour had set in. Still I think after rupture had occurred, the sudden local pain, and possible collapse, and after reaction, the sudden supervention of peritonitis, and that peritonitis localised, might possibly afford a clue to the diagnosis. And here would come into play a plan, I believe first carried out by Dr. Protheroe Smith in this country, of opening and washing out the abdomen. And we know that this washing out of the peritoneum was successfully done by Dr. Meadows in 1862, although more completely and extensively carried out since by Mr. Tait and Dr. Bantock.

I now pass to the subject of myomata, in the treatment of which so much that is new has been done. But at the outset I must say that I think some of the views inculcated as to their varieties are inaccurate, at least too crude. I venture to think that the classification into fibromas and hysteromas, and fibroids including the recurrent and malignant as occurring both among fibroids and fibromas, is the more scientific, and that the varieties we find in them are the results of changes, by softening, hardening, and absorption. These several points I fully detailed in my Lettsomian lectures published in 1864. Be this as it may, however, what chiefly concerns us to-day is the treatment, and this brings me to the methods now adopted, *extirpation, enucleation, removal of the appendages and electrolysis*. As I showed in the lectures before referred to, the mortality from extirpation *then* was 23 out of 33 cases, recoveries ten, *i.e.*, a mortality close upon 70 per cent. Looking, how-

ever, at these cases with the clearer light of modern surgery, we cannot but see now, that this mortality was as much due to errors in the operations, specially in securing the ligatures, and probably the absence of those measures of cleanliness and the use of antiseptics as anything else, and probably the small and insufficient experience of the operators in other matters of detail. Now-a-days we find that Dr. Keith obtained at last only a mortality of 12 per cent., Mr. Lawson Tait of 11 per cent., and Dr. Bantock of 19 per cent. So far proving that practice makes perfect, when men not only operate repeatedly on the same class of cases, but are wise enough to profit by the experience of others. Of *enucleation* I shall not speak now, but I may be pardoned for referring to the removal of the appendages as a mode of cure in arresting menorrhagia or exciting absorption of the tumour. I believe that Hegar was the first to practise the operation. In his book, "Die Castration des Frauen," which was published in 1878, it appears that he was the first to remove appendages (on July 27, 1872). Tait and Batty operated in August of the same year, but none of them wrote specially on the subject till some time afterwards. Hegar had operated for menorrhagia, though his first case was a *morphino-maniac*. Hoffmeier seems to have been the first to operate for menorrhagia alone. But amongst ourselves there is no doubt that Mr. Lawson Tait has the pre-eminence, and he has perhaps removed more tubes than any other man in these United Islands, possibly in the world.

In his work on "Diseases of Women," he records 474 cases in which he removed the appendages on account of damage arising from inflammatory disease, with only 12 deaths, *i.e.*, a mortality of 2.5 per cent., and for myomata 262 cases, with a mortality of 4 cases, *i.e.*, 1.6 per cent. How many of those who recovered well from the operation—were cured of their tumours—I find no complete record. Of his first fifty, however, the record is full up to some years after the operation—4 have died since from other causes not connected with the operation, 41 are in perfect health. In 17 of these he knows the tumours have entirely disappeared, and in 14 so materially diminished as to remain perfectly harmless.

Now these are grand results, and no one is more inclined than I am to give him the highest credit for what he has done. I regret the obligation put on him to republish his cases in America after the treatment he experienced here at the hands of another Society, but I do not wonder at it. What I have said in regard to the outcry against the use of the speculum, and against ovariectomy in some societies, because they were new operations, might have led many among us to expect a similar commination at first against the removal of appendages of the uterus. It was because some believed that Mr. Baker Brown by clitoridectomy mutilated so many women (which was not the fact) that so great an outcry was raised against him. Now castration is a greater mutilation still. In a man it is degradation to his manhood. A woman becomes a nondescript being, incapable of procreation, yet as we are informed on competent authority retaining all her feminine instincts—a living victim of misfortune, and saddened by the consciousness she is no longer a complete woman. Doubtless in many a case her mental adornments will make her even beautiful in her new life, but still it is a mutilation which she has undergone, the remembrance of which cannot be agreeable. But though I say this yet I would guard myself from being misunderstood. I do think it is a right and just thing to do, *if* no better means of saving life, and ensuring relief from constant pain, are at hand. In such cases our thanks are due to those who practise it. Still, if any other way could be found of accomplishing the same ends, and the castration could be avoided, it would be a greater triumph of surgery. The time was when a crushed hand would have necessarily been relieved by amputation, but Hancock showed that by putting such a hand in splints, in a boy, the hand could be saved and restored as a useful member. In a paper read before the Medico-Chirurgical Society by Mr. Alban Doran, he referred after a full consideration of the pathology of diseased Fallopian tubes to Dr. Skutsch's conservative operation "*salpingotomy*," where obstructed tubes, if *non-suppurating*, could be restored when a small piece of the

tube was excised ; and Herr Fieganspick has shown that a *restitutio ad integrum* after *tubal gestation* was possible, since in a case of his own where, after treatment by massage, a hæmatosalpinx, the result of ruptured tubal gestation, completely disappeared. Our late distinguished President, Dr. Macan, also informed us in his interesting valedictory address, that he had three times successfully performed salpingotomy in cases of hydro-salpinx. These results are very encouraging, and I trust will be still further extended. Indeed, it would not be a matter of surprise to me if some day Dr. Tyler Smith's operation of opening and dilating the tubes *per utero*, when the abdomen had been also opened, could be safely performed under ocular direction, and so even cases of stricture, it may be of obstruction, cured while the tubes were left intact. Possibly also a passage could be made through a previous salpingotomy from the tube into the uterus, and so the tubes restored to integrity, and the mutilation of castration be avoided. I may perhaps appear to speak too hopefully. Still I trust future experimenters in this direction may be found, and so develop a new phase in the treatment of diseased tubes.

There can be no doubt that even a diseased ovary may produce an ovum. Mr. Thornton believes that even if a very small portion of ovary remains, and the tube is passable, this will be sufficient to allow of impregnation. Again, the very interesting and instructive case mentioned by Dr. Bantock at our last meeting proves it. Here, notwithstanding that both ovaries were degenerated and fibrous, and had attained gigantic proportions, the woman from whom he extirpated them was not only then, but had been also pregnant with this co-existent disease fifteen months back, and been safely delivered. Those ovaries we all had the opportunity of handling and examining the woman remaining well, and her pregnancy continuing uninterruptedly.

Electrolysis.—But is there not any other way of obviating these operations for myomata? Of late the question of electrolysis as an alternate measure has come very pro-

minently before the profession, but the subject is still so comparatively new that the results are insufficient. One feels a little unwilling to discuss this subject, especially as it has been said (not over politely it is true) in this Society that those who advocate it, do so by "nonsensical talk." But I wish to speak reasonably and philosophically, and in more parliamentary language on the subject. Let me point out three fallacies at least. (1) Those who would pretend to practise ovariectomy must have learnt all the details, and profited from the experience of others. Should not those who wish to practise electrolysis equally learn all the details of the process, and also profit from the experience of others? If men will use either pole indifferently, without knowing that their effects are directly opposite; will not measure the amount of electricity employed, or the time during which they use it; if they select improper metals for electrodes, and use a faulty intermediate substance where necessary between the electrodes and the patients, how can they reasonably expect success? They will surely disagree with one another, fail, and disgrace electrolysis. Now we have the evidence of several who have tried it, and from their unsatisfactory answers when questioned, and perhaps more certainly by our own failures, that such inadequate knowledge is not uncommon. Then (2) why not accord to electrolysis what we claim for other operations, that early attempts have yielded frequently very unhappy results which later experience has enabled us entirely to avoid, "blunders inseparable from ignorance, blunders which help one not only to mend his own ways, but also to mend the ways of those who come after him, and who forget to credit him with the better results which his misfortunes have provided for them." These are Mr. Lawson Tait's *ipsissima verba*, only put in the third person to continue the sequence of my remarks ("Diseases of Women," i. 195).

Dr. Ephraim Cutter, of New York, has given us a series of cases so treated by himself and Dr. Guttmann Kimball. Dividing his cases in six series, non-arrests 7, arrests 25,

relieved 3, cured 11, and deaths 4; this is not altogether so bad a result.

Then Dr. Thomas Keith, who had the lowest mortality of all operators in hysterectomy (3 per cent.) in private (although in hospital it was four times as great), has now abandoned it and fallen back on electrolysis. In his latest work, in which Mr. Skene Keith is associated, we learn he has operated on 106 cases, with 87 recoveries and 3 deaths. These cases, it is true, have only eighteen months' history. Three tumours entirely disappeared. No large tumour, however, did so, but many became smaller. Dr. Rutherford has also reported his results in 14 cases. In one the tumour entirely disappeared; in 4 urgent symptoms occurred, and tumours decreased in size; in 2 no effect was noticed; in 3 treatment was discontinued; in 1 it was abandoned—or, as he otherwise states it, in 5 the result was favourable, 6 uncertain, 3 unfavourable.

Then thirdly, there is another more important consideration still which should not be lost sight of; it is the probable occurrence of *insanity* after hysterectomy. The proportion of such cases in Dr. Keith's cases was 10 per cent.—a large number. Mr. Tait had two cases after the removal of the appendages, but here I am content to accept his explanation that they might not have been caused by the operation, one woman having been insane before; the other was an example of anæsthetic insanity; while two who were insane were cured by the operation. Still, as insanity does not occur, at least in anything like a similar proportion in other cases of abdominal operation, the coincidence is remarkable. The fact is, too much has been erroneously assumed by the enemies of electrolysis, and too much foolishly asserted by its friends, in the treatment of fibrous tumours. It is quite true that it does occasionally lead to their entire disappearance, still oftener to their marked diminution in size. But the great result of electrolysis is to strengthen the patients and tide them over in safety till they have passed the menopause. It also often enables women (and this is of immense value among the working classes) who before its use have been incapacitated from work,

to resume their occupations, as if such tumours had disappeared. What more does removal of the tubes affect in most cases?

A discovery lately made by Dr. B. W. Richardson will possibly explain this electrolytic result. That distinguished physician has lately been trying the effect of a weak current of electricity on blood, selecting always a drop of his own blood, and watching the changes under the microscope, and he has found that the effect is to produce (although he cannot do so at will) various tissues not to be distinguished from those found in the living body—for instance, networks of cells and canals, fissures of cells, sometimes these cells empty, sometimes containing crystals like uric acid and cholesterine. A comparison was instituted between the modifications of blood under the vibratory shock, and the modifications induced by passing voltaic currents of various intensities through blood on the microscope slide. In the decomposition from the *voltaic current*, the fibrine separated at the positive terminal, and from the point where hydrogen was evolved globular spaces like the cysts above mentioned were produced. But the phenomena generally partook of destruction rather than reconstruction, while the phenomena from *vibrating shock* partook of reconstruction altogether, and the development of new and permanent structures.¹

“The forces at work,” continues Dr. Richardson (p. 380), “are as I at present, and subject to correction, think: (a) Vibration between the retaining glass surfaces and the retained blood. (b) Slow decomposition of water by which oxidation is permitted, and by which, under liberation of free hydrogen, the canals and cysts and other structural forms are, to speak familiarly, blown into form out of the colloidal material, as in the art of blowing glass, or soap, or albumen, into different forms by air and the breath. (c) Crystallisation of crystallisable matter that has been separated from colloidal.”

¹ *Asclep.*, 1886, p. 378-9.

We have possibly in this electrical action the explanation at once of the arrest or diminution of the tumours in their metamorphosis, while the same action explains the recuperation of strength in many of those who, after the treatment, have been safely able to resume laborious work.

I had hoped to speak of other improvements in *perinaeorrhaphy* introduced into England by Baker Brown, improved by Savage, Wynn Williams, and Bantock, simplified by Lawson Tait, and again improved upon by Fancourt Barnes; of the shortening of the round ligatures by Alexander in cases of retroversion of the uterus, or the stitching of the uterus by its hilum to the infundibulum pelvis by Imlach, or, as done by Dr. Heywood Smith, to some portion of the peritoneum, but time will not allow me. I was also very anxious to treat of the question of antiseptics in gynaecology, but the subject is too large, and I may reserve it for an especial paper at some future time.

It remains only for me to thank you for the honour you have done me in electing me as your President. To serve under so distinguished a man as your Hon. President, Dr. R. Barnes, whose name is famous in Europe and America as one of our greatest obstetricians and gynaecologists, is no small honour. To follow some of those who have preceded me in this chair adds to the lustre of the appointment. I trust that by strict impartiality, by courteous demeanour among you I may prove myself worthy of that honour. One thing however, in conclusion, I feel I should say. The great desideratum we must aim at is a more accurate diagnosis—a diagnosis not only of a present condition but of a future change which may supervene upon that condition. Surgery may remedy serious evils, but we should seek rather to prevent their occurrence.

The Prophet King of old sang most delightfully but most truthfully, when he said, "I will praise Thee, for I am wonderfully made. Marvellous are thy works, and that my soul knoweth full well. My substance was not hid from Thee when I was made in secret and curiously wrought in the lowest parts of the earth. Thine eyes did see my substance

yet being imperfect, and in Thy book all my members were written, and in continuance were fashioned, when as yet there were none of them." I trust the time will come when *man*, more enlightened than now, will also be more pure and honest in his work, when science shall have disentangled the knotty meshes linked together amid created things and which hitherto have been tied up in mystery, and he again will be able to show forth something of his Creator's reflected Divinity by the effectual prevention of disease. Already sanitary measures have diminished mortality, and the influences of season and miasmata have been investigated; but when the laws of the re-energised microbes hitherto invisible, quiescent and indefinite, and their newly developed life have been studied, when the manner of their metamorphosis has been more accurately understood; when culture of these organisms has generated similar microbes capable of producing at will, when inoculated, diseases of less severe type, yet rendering such persons proof against the more malignant forms; when as the symptoms of disease occur we shall be better able to isolate and localise their action; when, in fact, we shall have learnt more about this wonderful body which our spirits inhabit; when the secret springs of those correlated forces in operation have been unravelled—then, like our divine Master, we may hope under a mightier influence to show forth the mysteries wrought "in the lowest part of the earth" and the air above it, to see the seeds of disease yet imperfect approaching from afar off. And then may a more enlightened medical literature—because more practical and complete—adorn and teach our successors the laws of that "continuance in which they were fashioned." Then we may hope that the number of diseases will diminish, and their power be so weakened that at last there shall be few of them to weary man. Then humanity will have reached a degree of happiness never before attained, that happiness being always progressive because it is founded on incontrovertible and eternal Truth.

Dr. BANTOCK, in proposing a vote of thanks to the Presi-



dent for his able and eloquent address, observed that he would like to question the statistics of hysterectomy on which the President's remarks had been based, and he pointed out that there was a contradiction in reference to the operations of this kind performed by Keith. In one part of the paper the mortality was given as 3 per cent., and further on as four times three. Beyond this he thought the address was an exceedingly creditable one, both from a literary and a professional point of view, and he had great pleasure in proposing a vote of thanks to him therefor.

Dr. EDIS concurred in the sentiments expressed by Dr. Bantock, and the motion was then agreed to by acclamation.

The PRESIDENT gracefully acknowledged his sense of the honour that had been conferred upon him that evening, and, in reply to Dr. Bantock, he said he had taken his figures from Mr. Keith's own writings that, while the mortality was as low as 3 per cent. in private practice, it had been four times as high in the general hospital.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, FEBRUARY 12, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 30 Fellows, 1 Visitor.

The following were elected Fellows of the Society:—Dr. Gray, Newmarket; Dr. Collins, Birmingham. The following was proposed for election:—Bowie Campbell Gowan, Stanmore, Middlesex.

Dr. PARSONS showed an instrument invented by Dr. Campbell Gowan for the reposition of the inverted uterus by means of hydrostatic pressure.

Dr. BARNES pointed out that the instrument lacked the leverage upon the uterus which was obtained in the instrument devised by himself for that purpose.

Dr. FANCOURT BARNES showed a parovarian tumour, together with some of the fluid which had been withdrawn therefrom, which he thought was very characteristic of parovarian cysts, being very bright and crystalline in character. The patient was thirty years of age, and had been married six years. Her last confinement was sixteen months before. Since that time she had experienced a good deal of pain in the sacrum and back. She was admitted into the hospital on January 4th, and on examining her he found what was afterwards diagnosed to be an ovarian cyst fixed in the pelvis. On subsequent examination, finding that the tumour was moveable, he came to the conclusion that it was an ovarian cyst. On the 16th January he performed ovariotomy in the usual way. On passing his hand into the pelvis he felt the cyst, but found it was impossible to lift it out because the pedicle had got twisted low down in the pelvis. He had called the attention of his colleagues to the fact of

the pedicle being twisted during the operation. He therefore inserted a trocar and withdrew the fluid. The tumour then collapsed, and all further difficulty was at an end. The sac was removed, together with the ovary on the same side. The pedicle was easy to tie. The tumour contained 2lbs. 4ozs. of the clear fluid. He showed the specimen because they did not often find ovarian or parovarian tumours blocked in the pelvis, and so blocked as to lead the gynæcologist to believe that it was a pelvic swelling. The patient left the hospital perfectly well some days since.

Dr. RUTHERFOORD did not think that the fluid in this case could be called characteristic of either ovarian or parovarian fluid. He recalled a case operated upon by Dr. Bantock in which the fluid was perfectly clear, and in which he demonstrated to the visitors that it was ovarian, but it turned out to be parovarian.

Dr. MANSELL-MOULLIN asked whether there were any symptoms of twisted pedicle present. He observed that the fluid was not what one would have expected in such a case, for twisting of the pedicle generally led to effusion of blood into the cyst.

Dr. BANTOCK corrected Dr. Rutherford's statement with regard to the case upon which he had operated. He spoke of fluid obtained from parovarian cysts in the paper which he had communicated to the Obstetrical Society. He had pointed out that the characters of a fluid from parovarian cysts was very characteristic, the Sp. G. being about 1004, no albumen whatever being present. His object in mentioning the case was to show that even this characteristic of the fluid was not reliable, for in an undoubtedly parovarian cyst the fluid had contained a quantity of albumen.

Dr. FANCOURT BARNES, in reply, said he was not a microscopist, but he did know that specimens of fluid from ovarian tumours had been submitted to microscopists for inspection, and that on various occasions they had been wrong in their diagnosis. Personally he attached no importance to such fluids from a diagnostic point of view as they seemed to, but

he had never seen a clear fluid such as that come out of any other tumour than a parovarian. There were no symptoms of twisted pedicle, but as to the fact of the pedicle being twisted, he said he had the evidence of his own eyes.

Dr. BANTOCK asked whether the fluid had been tested, and whether any albumen had been detected, also as to the Sp. G.

Dr. FANCOURT BARNES said that it had not been tested.

Report on Dr. Fenton's Case of Fibrocystic Tumour of the Uterus.

Operation performed on October 17th, and the specimen referred to Pathological Sub-Committee on October 23rd, 1889.

The specimen consisted of part of the fundus uteri, to which was attached an oval tumour, measuring about six and a-half inches vertically, five inches in diameter, and sixteen inches in circumference. The left ovary and part of the left tube were still attached to the tumour. On examining the tumour, a small cavity about an inch in depth was found at the lowest part and to the right side, which was the right corner of the uterus; both ovaries were removed, the left being still attached to the tumour. On the upper part of the growth there are a number of small fibroid masses of irregular shape. The cavity of the cyst is oval, and its lining rough and irregular; an epithelial lining membrane is altogether absent. The wall is of different thickness in various parts, varying from one-eighth of an inch at the posterior and left, to two inches at the lowest part. Its structure was that of a uterine fibro-mymata. The cyst was unilocular. The fluid contents measured forty-eight ounces, and were faintly alkaline in reaction; specific gravity, 1.015. The fluid was straw-coloured, slightly blood-stained, with some flocculent coagula floating in it. Coagulation took place spontaneously to a slight degree, but on addition of acetic acid and boiling, it became nearly solid with albumen. Unfortunately a

sufficient quantity was not preserved to allow a thorough analysis to be made.

Microscopical examination.—Sections were made through the entire thickness of the tumour-wall, and presented in their deeper parts the typical structure of a fibro-myoma. The inner surface of the wall of the tumour was entirely devoid of any endothelial lining, and presented a ragged and irregular appearance. The tissue immediately in contact with the fluid contents presented a peculiar, almost hyaline, appearance, devoid of any structure or only very finely fibrillated. This appearance may be due to the action of the hardening fluid, or may be fibrine. Lower down this hyaline appearance is still maintained, but is found to contain long rod-like bodies with rounded extremities, similar to the nuclei of non-striated muscular cells. As the muscular tissue is neared, these nuclei become more marked, and are seen to be contained within cell walls, which are at first dimly marked, become more visible as the deeper tissues are marked, until at length typical non-striped muscular tissue is found. In the more superficial layers the cells and nuclei are cloudy and granular, but gradually assume a normal appearance deeper down.

The rest of the changes may be described as mucoid. This mucoid degeneration of the connective tissue affects the structure of the tumour-wall not only superficially, but deeper down may be seen patches undergoing similar changes.

No dilated lymph channels or blood-vessels are to be seen ; nor is there any trace of myomatous tissue, such as is described by Virchow as occurring in certain of these cysto-fibromata.

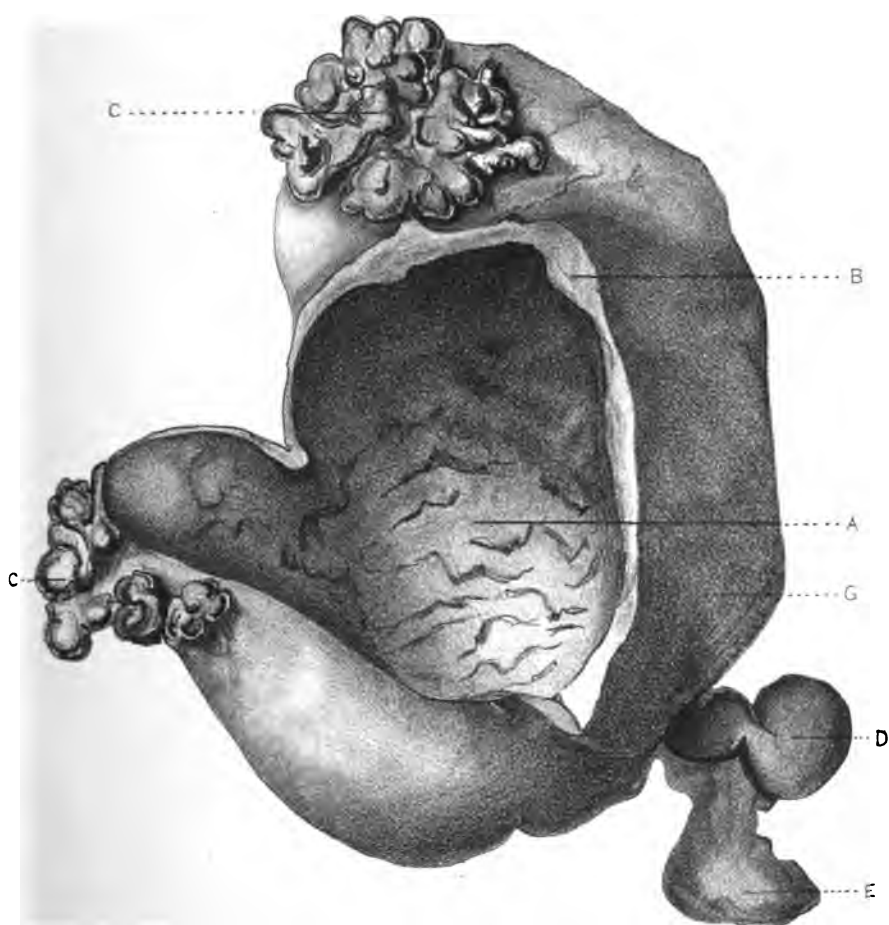
In conclusion, the specimen may be described as a uterine fibro-myoma, which has undergone mucoid degeneration—the changes being first produced in the connective tissue portion and afterwards involving other tissues, until at length a cyst was formed. The true cause of this change is, however, impossible to state.

HENRY T. RUTHERFOORD.

*FIBRO-CYSTIC TUMOUR OF UTERUS, REMOVED BY
DR. FENTON.*

- (a) Interior of Uterus ; ragged and rough.
- (b) Wall Cut to show Interior of Cyst.
- (c) Fibroid Nodules on Outer Surface of Tumour.
- (d and e) Tube and Ovary.
- (g) Position of Fundus Uteri.

Fibro-cystic tumour of Uterus
removed by D^r Fenton.



H.T.R. del.

Danielsson & Co. lith.

Dr. BEDFORD FENWICK pointed out that some of the most rapidly growing tumours were fibroids of the uterus in which degenerative changes had caused cystic formation, and the cysts by their development caused a rapid increase of the tumour. He had recently had a case sent to him for treatment, in which the peculiar point had been noted that the tumour grew with exceeding rapidity, and it turned out to be a fibro-cyst of the uterus. The wall was markedly thinned in some parts while in others it exhibited the typical thickening of fibroid tumours.

Dr. BANTOCK showed two specimens, being examples of fibroid tumours of the uterus. One was an example of the hard and the other of the soft fibroid. The first tumour, with which was joined two similar tumours, had been removed on the 22nd January, from a married woman aged thirty-seven, who had had no children. There had been no disturbance of the menstrual function whatever, but there had been a good deal of pain before and during the period. It was in consequence of the pain which sometimes occurred between the periods as well, that the patient desired the removal of the tumour. He had put the patient off as long as he could, but at last he had been obliged to take her in hand. There was some difficulty in the operation, because the two small tumours projected from the back part of the uterus. One dipped down to the bottom of Douglas's pouch, and there were a few adhesions in the pelvis. He put an elastic ligature below the larger one and divided the envelope, thus obtaining a pedicle. It was above the level of the ovary, and this he managed to remove by ligature subsequently. The other was so low down that he had been unable to get it out and so had to leave it.

The other case had been operated on on the 8th inst. The patient was a single woman, aged twenty-three. The menstruation had been regular without pain or excess. The tumour weighed $2\frac{1}{2}$ lbs. in its present condition, and the greater part of the growth had taken place within the last few months. That was explained by the fact that it was a soft

fibroid, and thus invited comparison with the other. The difference could be seen without any microscopic examination. It was one of those cases in which it had been proved that the removal of the appendages was of no value whatever. The cavity of the uterus was but slightly enlarged, if at all, and the remainder of it might be seen on the lower part of the tumour. That represented the anterior wall of the uterus, and the posterior wall had been removed at the same time, but had been taken away for microscopical examination. The operation in this case was very different from the other, because the ovaries were so low that they could not be included in the loop of the same ligature, and he had been obliged to put on an elastic ligature first of all. He divided the capsule, enucleated and put on the elastic ligature on to the raw surface. In that way the broad ligament was set free, so that subsequently he was enabled to ligature both the ovaries without any difficulty. If he had adopted the same method in the other case as in this he could have removed the right ovary, which he had been obliged to leave but it was on account of the difficulty in that case that he made up his mind to leave the broad ligaments free so as to relax the strain on the ovarian ligaments. Then the envelope was attached to the parietes, so that everything was outside the peritoneal cavity. That patient also was doing perfectly well.

I have another specimen here in a fresh state. It is one of very great interest. I have here a foetus of about six months, and the *sac* from which it was removed. The patient is a married woman, aged thirty, the mother of one child five years ago. She entered the hospital on the 1st of July of last year. She had a small tumour occupying the right side of the hypogastrium, dipping into the pelvis and pushing the uterus up against the pubes, and in the lower part a peculiar body could be felt, which I took to be the knee or the elbow of the foetus. The history was of such a nature that I came to the conclusion that the case must be one of extra-uterine gestation. The patient menstruated for the last time on Feb.

8th, 1889. In May there was a coloured discharge lasting a month. She did not pass any well marked substance that she was aware of, but pieces of soft material like skin came away at the end of a fortnight. There was no particular pain at the time, but this set in soon after, and continued until she entered the hospital. Ever since the birth of her first child menstruation had been painful during the first day, and had been accompanied by a pain at the lower part of the back. She gave the following history :—She was well up to the end of February and until the latter part of May, when she felt a fulness, but no pain. At the end of May she had a coloured discharge—that is, menstruation accompanied by pain. A fortnight after the pieces of “skin” came away, and at the end of the month the discharge ceased. There had been no morning sickness, and until the end of May she had been able to do her usual work. She was admitted on July 6th. There were no very urgent symptoms, though the temperature was somewhat above normal. On the evening of her admission it was $99^{\circ}.6$, and it continued to rise to 99° for some days. I kept her quiet in bed and just attended to her general health, and as at that time the hospital was about to be closed for the annual cleaning, I had to send her home. As it was evident that she had gone beyond the period of rupture, and as if rupture had taken place it had not been into the peritoneal cavity, I made up my mind to let her go on, in the absence of urgent symptoms, in order to give her the chance of bearing a living child. For a time the tumour seemed to grow rather rapidly, and in the month of August, just before I was going away for my holiday, I saw her again, and found that the increase in size was no longer so rapid. I kept her under observation and saw her in October, and December, and finally admitted her into the hospital in January. It was quite evident that the tumour had not grown materially since the last measurement in October. The diagnosis of extra-uterine gestation was strongly impressed upon my mind when I first saw her, and again in October, but latterly a doubt had crept into my mind as to whether after all I had not made a

mistake, for the mass had risen up out of the pelvis very considerably, so that the uterus was almost in its normal position, instead of being jammed against the symphysis of the pubes. I operated this very afternoon, and as soon as I had exposed the tumour, uterine muscular tissue was at once perceived. Careful examination of the whole of the surface of the tumour showed that the case was likely to prove one of extreme difficulty, in so far as the removal of the cyst was concerned. I therefore introduced a small trocar, and found a dark coffee-like fluid in the cyst. I then made a larger opening, and certain by this time that I had to do with a case of extra-uterine gestation, I made an incision into the cyst and extracted the foetus. Then I proceeded to remove the placenta, fearing that I should not be able to remove the cyst itself, and with the intention of draining the cyst cavity. There was so much bleeding, however, from the simple fact of my having passed my hand all over it, that I determined to make an effort to get the cyst itself away. In doing so I had to separate several coils of intestine, which were adherent. Then I got down to the right broad ligament, and shelled out the whole of the tumour and secured the pedicle, the Fallopian tube and a large extent of the broad ligament. I then washed the abdomen well out with hot water and put in a drainage tube, and the patient was as well this evening as one could expect. I have preferred to show you the specimen in its recent condition, because it gives a much better idea of the nature of the case than when deprived of all colour, as it would be by the usual process of preservation. I wish to insist upon one point in connection with the rupture of the Fallopian tube. That this was originally a Fallopian pregnancy there can be no doubt. Mr. Tait has laid it down with far too much dogmatism that a Fallopian pregnancy always ruptures at about the thirteenth week, either into the peritoneal cavity or into the cavity of the broad ligament. I think that his statement is too absolute, for here is a specimen of such a pregnancy going on to the sixth month, without any rupture taking place. This is an important point

in the prognosis, supposing that it has been recognised at an early stage.

Dr. HEYWOOD SMITH asked whether this was not the only case on record in which an oviductal pregnancy had proceeded to this extent.

Dr. Heywood Smith showed a specimen of dermoid tumour of the ovary removed from a married woman aged thirty-five, the mother of four children. Premature labour had been induced in October last between the seventh and the eighth months, in consequence of a difficulty in former labours owing to this tumour. He had first seen the patient in 1886, when he had diagnosed dermoid tumour of the right ovary. Yesterday he had removed the tumour without any difficulty, for there were no adhesions. The interest of the case lay in that the woman was pregnant, she having passed her second menstrual period on January 28th.

Dr. Smith also showed a rare and interesting specimen of a fibroma of the right labium removed from a single woman aged forty-six, who came to see him in May of last year. She had said it had been growing for five and a-half years. He at first thought from the feel that it was a very tense cyst, but when he cut through the thinned skin over it, it shelled out without any difficulty and proved to be a fibrous tumour.

Dr. BANTOCK asked a question as to whether the literature of the subject did not give examples of pregnancy going beyond the usual period of thirteen weeks. He was not aware of any cases in which the child had gone on to full time, except in the well-known case reported by Dr. Berry Hart. That was a case of rupture into the broad ligament, in others the child fell free into the peritoneal cavity owing to the rupture, but he was not aware of any cases in which the Fallopian tube had resisted the growth of the foetus over thirteen weeks.

Adjourned Discussion on Mr. Jessett's Paper.

Dr. BANTOCK said that Mr. Jessett had facilitated a discussion by presenting a series of conclusions. The first of

these was that when carcinoma attacked the vaginal portion of the uterus it was best treated by amputation of the cervix, and preferably by means of the scissors. There was no difference between them on the point as to the advisability of treating such cases by amputation of the cervix, but when it came to the question of the way in which the operation was to be performed it was otherwise. He was not quite satisfied in his own mind that the scissors constituted the best means of removing the cervix in these cases. A great deal of bleeding would take place, especially if there were much enlargement of the cervix. He thought that Paquelin's cautery was much preferable to the scissors, but of course he would go through the preliminary stage of dividing the mucous membrane around the cervix so as to be able to apply the wire for the electric cautery or to mark out the line of division by Paquelin's cautery. They were quite agreed as to the after treatment of the case, for they had in iodine a most remarkable means of arresting putrefaction in any cavity. He had nothing to say in reference to the second conclusion that caustics were unreliable and even harmful. The difficulty of applying caustics and of limiting their action was very great. He had tried various substances—bromine, chloride of zinc, &c., with results that had been very unsatisfactory. With caustics it was almost impossible to avoid doing too little or too much. The third conclusion bore on the treatment of cervical cancer by removal of a conical piece, or, if necessary, to take it away *en bloc*, removal by the *écraseur* being inadmissible. The answer to that question would depend upon whether the disease was seen at an early stage or not. If he could be quite sure of the nature of the case at the early stage, when it looked like severe excoriation, then he would be tempted to remove the cervix by amputation. Unfortunately, however, he had never been called upon to attend a case of cancer at that early stage, so that he was confronted with the difficulty that what he would have done had he seen the case earlier, was probably very different from what he found himself compelled to do in the unfavourable

condition in which he did see it. In an early stage of cancer of the body of the uterus, he would advocate total extirpation of the uterus. In view of the impossibility of making sure that one had got beyond the line of disease, the radical measure was to be preferred to the tentative one. When attacking the body of the uterus it was generally of the epithelial variety, but he had sometimes seen a hard cancer in that part. He remembered one such case in an old woman, in whom the disease was confined to the body of the uterus. The vagina, &c., was too small to admit of vaginal hysterectomy, and when abdominal section was made it was discovered that the disease had already gone through the body of the uterus, and had caused a connection to be set up between the sigmoid flexure and the uterus. The result was unfortunate, for the rectum had been opened up in two places and the patient only lived four or five days. With reference to the proposition that no drugs administered internally had any effect in arresting the disease, he mentioned an instance in which he had employed the Chian turpentine in a case of carcinoma of the cervix, in which he also used chloride of zinc. He first removed as much of the cervix as he could, and the patient was very much relieved for several months. With the view of helping the treatment he had some pills made according to Clay's formula, and some weeks after the patient complained very much of pain on defæcation. Several enemas had to be given, and at last a large mass came away about the size of a tangerine orange. That mass was composed almost entirely of Chian turpentine pills.

Dr. INGLIS PARSONS said he had recently come across two gentlemen, Sir Spencer Wells and Dr. Aikman, of Guernsey, who had both tried this treatment and had obtained some good results from it. It ought not to be assumed that it was no good because in every case it did not answer. He observed that Mr. Jessett seemed to have used electricity in the treatment of cancer, but only in the form of the electro-cautery. He also spoke of sloughing having followed it. One would

expect that, if the ordinary galvano cautery were used, he did not gather what kind of current was used, but the treatment which he himself had found useful was killing the cells by a violent shock, which certainly did not produce a slough. In no case, at Chelsea, had he had any rise of temperature or sloughing. In one or two cases he had seen sloughing, but that was due to the large size of the growth. Under ordinary circumstances, if the shock killed the cells they would go through the process of atrophy or degeneration and so be absorbed. If the cells were in a large mass it was impossible for the process of absorption to take place, and so suppuration followed. When suppuration occurred it came on with a rise of temperature within forty-eight hours. He did not see how they were to prove the caustic action of the current in the direct line between the electrodes, unless they could interpose test papers at the several points. That in any case was not his own method of treating cancer. He only flashed the current through a given part for, say thirty seconds, at a strength of five to six hundred milliampères. The caustic action developed in that time would be exceedingly small. It was not easy to apply the electrodes, it had to be studied and learned. He did not think anyone had a right to speak on that point until he was thoroughly master of his batteries and able to see whether the electro-motive force was absolutely what it was asserted to be. He had noticed that the electric resistance of tumours varied very greatly, and he got as much current in one from forty cells as in another from eighty. He said that the *density* of a current was a factor of importance to consider, for if the current were spread out it would not cause the same effects.

Dr. PURCELL said the operation suggested in No. 3 of Mr. Jessett's conclusions was certainly a new departure. The rationale of the operation was that the inner surface of the uterus was capable of being snipped away with scissors, and so removing the disease, leaving the peritoneal surface of the uterus intact. He had been surprised at the amount of healthy as well as diseased structure that could be removed

in this way, and there was no bleeding to speak of. If it could be shown that recurrence did not take place, then he thought it would prove an improvement on the removal of the entire uterus for disease of only a portion. He had himself performed eight total vaginal extirpations of the uterus with three deaths due to shock. He found that if the vaginal mucous membrane in the neighbourhood of the os uteri was at all infected by cancerous disease, it was not advisable to perform vaginal hysterectomy; proliferating cells find themselves in the cellular structures beneath, and such being the case, recurrence is sure to occur at no distant date. His mortality has been in vaginal hysterectomy $37\frac{1}{2}$ per cent. When he reported his first four cases he had no death. When they were discussed Mr. Reeves said the mortality was 21 per cent. He might say that he found the cases suitable for the operation few and far between, and having examined many at the Cancer Hospital with the view of operating, had found the cases too far advanced to recommend the operation. He was puzzled to know where the German surgeons found all their cases; indeed, those on whom he had operated he must confess were not what he would select as the most favourable. His first case lived eleven months and died from recurrence; his second is still alive four years and four months after operation; no recurrence; third and fourth cases lived six and seven months respectively and had recurrence; his sixth case is still alive one year and three months after operation; those that died succumbed to shock about the third day.

Dr. RASCH said he had tried Chian turpentine, but had given it up as useless. Some time since he had a lady under his care with cancer of the fundus of the uterus. She had formerly had syphilis. She had consulted him last year and he had found small lumps on the fundus of the uterus. He tried iodide of potassium, which did no good, and soon after a discharge set in. He took her into the hospital and tried to remove part of the uterine mucous membrane, and did so on two occasions, but no evidence could be found of cancer.

Still he felt sure that it was cancer and he determined to operate. He did so and had a great deal of difficulty, because the vagina was rather narrow, and he lost a good deal of time in endeavouring to stop the bleeding. At last this got so alarming that he secured the broad ligaments with two clamps. That stopped the bleeding and he could cut out the uterus without any difficulty. She made a splendid recovery. There was undoubted cancer of the fundus. He had kept her under observation since the operation, now seven months ago, but he was sorry to say that the cicatrix showed signs of induration, and he had little doubt as to what that meant.

Dr. Rasch said that the result of Tait's advice was to make many patients lose their best chance of recovery. He only devoted three lines to it in his book, while he devoted twenty pages to some affection of the labia. He had no confidence in amputation of the cervix, because it was impossible to know how far the disease extended. He preferred total extirpation.

Dr. MACNAUGHTON JONES said there could be no more interesting question than the one as to the best operation to advise when they were certain that a patient was suffering from malignant disease of the womb. It was not only a question of how to prolong life, but of effecting a cure. Most men could recall cases in which they regretted having practiced amputation of the cervix, the general result of which was unsatisfactory. With reference to the cases in which the cancer was limited to the uterus, and did not involve the vaginal mucous membrane there was a very important point connected with the pathology of cancer, which must not be lost sight of, viz., the question as to the Fallopian tube being involved. In looking over the statistics he had found that in the year 1888, 183 supra-vaginal hysterectomies had been reported with twenty-two deaths due to the operation itself, while recurrence was noted in twenty-three and permanent cure claimed in thirteen. He had taken these figures from the *Annual of the Universal Medical Sciences*. He observed

that it was very unsatisfactory that they heard so little of the ultimate results of these operations, and that was particularly the case with hysterectomy. If he were called upon to advise in a case in which either clinical or microscopic evidence pointed to carcinoma of the uterus, he would unhesitatingly advise hysterectomy, and not supra-vaginal amputation; premising, of course, that the men who performed the operation were skilled and experienced men. He regretted that the more radical operation did not meet with greater favour, but he trusted that the time would come when the same general surgical principle would obtain with regard to cancer of the uterus that obtained elsewhere.

Dr. RUTHERFOORD asked the author whether he had met with any cases of epithelioma. Text books taught that epithelioma of the cervix was the commonest, but he believed that as a matter of fact it was rare in the uterus. At any rate, he had not been able to meet with one, and Dr. John Williams had not been more successful. He asked Mr. Jessett to describe the signs and symptoms of what he described as the pre-cancerous stage. Considering that the disease was rare as attacking the Fallopian tubes, and that the disease was at first more or less confined to the uterus, he thought that supra-vaginal hysterectomy was more hopeful than supra-vaginal amputation.

Mr. JESSETT, in reply, said the question was one that had given him a great deal of anxiety for many years past. The diagnosis of the pre-cancerous stage of uterine carcinoma was the crux of the whole question. Was it an erosion, an abrasion—or what? Little by little when the disease existed it had a tendency to extend downwards, backwards and outwards. The squamous epithelium was destroyed and the columnar epithelium crept down to the external os. Whether that constituted the pre-cancerous stage, he was not prepared to say, but the question would have to be decided by men who had opportunities of seeing the disease at an earlier period than hospital surgeons could do. When this con-

dition was accompanied by discharge and pain, then he should regard it as a pre-cancerous stage, in which case he should advise supra-vaginal amputation. The subject was too vast to admit of an exhaustive discussion on that occasion, but he hoped at some future meeting to show specimens of different uteri which would lead to the matter being thoroughly threshed out. He had seen cases in which good had attended scraping out the cavity of the uterus and applying chloride of zinc, but he did not think these measures could be relied upon for curative treatment. The action of caustic was uncertain and then might easily do more harm than good. With reference to the use of the galvano-cautery in preference to the scissors, he observed that one could never tell exactly where the wire was going and it was apt to slip, doing a great deal of harm. As Marion Sims had pointed out, the ureter might even be included in the wire. If they pulled the uterus well down the supra-vaginal operation was very easy with the scissors. He said he had given Chian turpentine a long and fair trial, but beyond some apparent relief of the pain he had never seen any good result. As a curative treatment it was utterly valueless. When he used the galvano-cautery he passed one pole into the cervical canal, and then passed the other needle deeply into the diseased portions around the os, maintaining a constant current producing a caustic action all the way round. With regard to Dr. Parsons' remarks in respect of the varying resistance through a tumour, he recalled a case of a small hard growth, in which the needles were only about an inch apart, and they passed a current from a battery of 100 cells. They had one of the best electricians in London to manage the battery. At first they got 600 milliampères, which lasted, however, only half-a-minute ; it then fell to twenty and it could not be made to go higher. They withdrew the needles, but the same thing recurred. The electrician had suggested that a gas formed at the poles which prevented the passage of the current. With regard to the caustic action, he had a case in which there was distinct slough between the poles indicating what he took to

be the caustic action. So far as they were concerned, they had abandoned that line of treatment. He claimed that he could cut out the whole of the interior of the uterus without wounding the peritoneum. He ought not, perhaps, to have used the word cure, for that the future alone could decide. If the disease had extended to the fundus uterus, then there was no doubt that extirpation should be performed. The fundus, however, was usually free from disease, which was generally localised in the neighbourhood of the cervical canal and os. Their pathologist reported the cases as carcinoma.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, FEBRUARY 26, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 25 Fellows, 6 visitors.

The following was elected a Fellow of the Society:—Dr. B. C. Gowan.

Mr. DUNNETT SPANTON showed some microscopical sections made from a specimen of epithelioma, obtained from the cervix uteri, the history of which, he said, presented several interesting features. The patient was a married woman aged thirty-three, the mother of three children. She had first consulted him in June last, on account of profuse purulent leucorrhœa, associated with an ulcer of the cervix uteri. As there was a history of syphilis, contracted from the husband, she was put on anti-syphilitic treatment, and the ulcer was touched with nitric acid. In the course of a few weeks the ulcer healed up, and nothing more was seen of the patient. Two months ago, however, she turned up again with an ulcer on the same spot, on the anterior lip of the uterus, about the size of a sixpenny piece, with hard and everted edges, and with a decidedly malignant look about it. So much was this the case that he decided to excise it. Microscopical examination afforded clear evidence of carcinomatous disease, and that was why he had brought the specimen forward. The interest of the case lay in the fact that a malignant growth had formed in the site of a specific ulcer, which had yielded to treatment. He mentioned a similar case which he had seen some time since, in which malignant growth had developed on the site of specific lesion six months after it had been made to heal by anti-syphilitic treatment. He suggested that the moral to be drawn from these cases was that where

the appearances were such as to give rise to a doubt, they should put caustics on one side and proceed at once to remove the cervix. There was no family history of cancer in this case. In reply to Mr. Reeves, he said that his diagnosis of malignancy rested partly upon the microscopical appearances.

Mr. REEVES observed that microscopical appearances alone were not to be relied upon in such cases, as they might, and often had, proved fallacious. He said that similar "nests" might be found in many parts of the body, and were not absolutely diagnostic of epithelioma.

Dr. INGLIS PARSONS said that many cases were on record in which cancer had formed on the site of specific lesions.

Dr. BARNES asked whether there were any other indications of syphilis beyond the ulcer.

Dr. BEDFORD FENWICK mentioned the case which occurred eighteen months ago of a woman with syphilis who had erosion of the cervix, which certainly looked very much like epithelioma. There being a history of syphilis, he decided to try iodide of potassium, but by some mistake only an aperient iron mixture was given. Nevertheless the erosion disappeared in the course of a fortnight. Within three months, however, that woman turned up with distinctly malignant growth, which had by that time invaded the vagina. He did not think that the healing-over of the sore was any proof of its specific nature.

Dr. HEYWOOD SMITH asked what evidence there was that the growth was not malignant from the beginning, also what evidence there was as to the origin of the malignant growth being the site of the alleged specific ulcer.

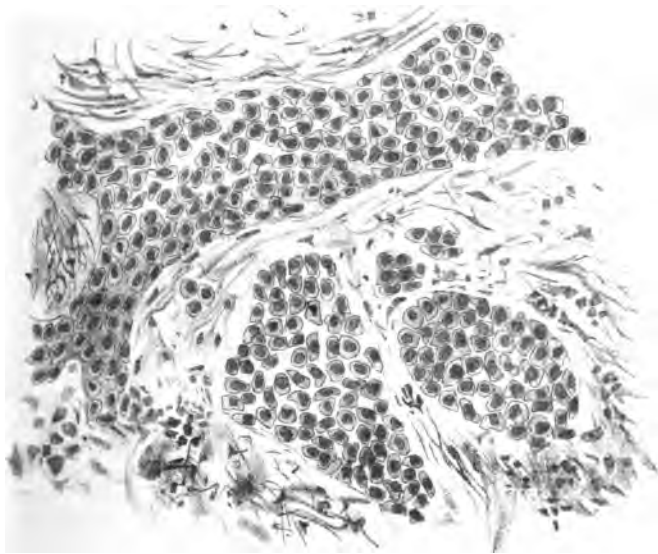
Dr. SPANTON, in reply, said that the woman was quite well at present. She had an unmistakeable specific sore throat when he first saw her, and he thought that the very fact of the ulcer healing over in that way was sufficient evidence of its not being malignant. He had only operated a fortnight ago, so that he could say nothing as to the future.

Mr. REEVES showed a tumour which he had removed

from a patient, the wife of a medical man. This tumour had been taken in the first instance to be ovarian. The uterus was of normal size, as shown by the sound. At the time of the operation, when he came down on the tumour—the presenting portion evidently containing fluid—he introduced a trocar, when Dr. Fenwick's diagnosis of fibroid tumour was justified by the escape of altered blood. It proved to be a fibrous tumour undergoing cystic degeneration. It was attached to the fundus uteri by a respectable pedicle. The patient recovered without any trouble. It so happened that a week before operating in this case he had had to do with another, in which he had been led to make a diagnosis equally erroneous, but the other way about, in consequence of the indications afforded by the sound. It was the sound that had deceived him in both cases. In the fibroid case it had shown the uterus to be of normal size, and apparently unconnected with the uterus, while in the ovarian tumour the uterus appeared to be enlarged. He concluded that the evidence afforded by the sound alone was often useless when not positively misleading. The specimen from the second case was a large solid ovarian tumour with some cysts, with a history of amenorrhœa for the preceding six months. There was a large tumour, which had been thought, on one occasion, to be enlarged spleen, and another had suggested that it was a bi-cornual uterus with a dead fœtus. As she had not menstruated for six months, it was thought prudent to allow the nine months to elapse before taking any further steps. At the expiration of that period the sound was passed into the uterus, and entered six inches, and so they concluded that it was a fibroid. They operated and found that it was ovarian. These two cases spoke strongly against trusting to the use of the sound for diagnostic purposes.

The third case was from the London Hospital. The patient was twenty-eight years of age, and had a tumour, which extended two and a-half inches above the umbilicus. In that case, after tying the broad ligament, he tied each uterine artery separately, and treated the stump after the intra-peri-

Mr Dunnett Spanton's
Microscopical Section.



Objective Zeiss' C
Eyepiece B

Bale & Sons Lith.



44

toneal method. This case was one of a small series that had perfectly recovered. He took the precaution to destroy the cervical canal by means of Paquelin's cautery, and he left in a drainage tube for a day or two. He particularly commended the practice which he suggested, of tying the uterine arteries separately, which had for effect to prevent any hæmorrhage. He thought that they would soon be able to show that the removal of the uterus in properly chosen cases would have as little mortality as ovariectomy with the intra-peritoneal treatment of the pedicle.

Dr. BANTOCK observed that the specimen was very characteristic of a fibroid tumour undergoing cystiform degeneration. It was not a true fibro-cyst of the uterus, but a solid tumour undergoing degeneration. The cavity was rough and contained no semblance of a secreting membrane. The views expressed by Mr. Reeves with respect to the uterine sound were very much at variance with those which he himself held and which seemed to have become confirmed in his system. He was not surprised that Mr. Reeves had been misled by the sound, for he seemed to have looked to that instrument to furnish information, which it was never intended to give. If when he found that the uterine cavity measured two and a-half inches, he concluded that the tumour could not be a fibroid, it was not surprising that he occasionally found he had made an erroneous diagnosis. He observed that the uterine sound was, perhaps, the most abused instrument of all those used in gynæcological practice, and yet it was, in his opinion, one of the most useful. He pointed out that the size of the uterus bore no sort of relation to the nature of the tumour, but only showed the extent to which the cavity was affected. A fibroid springing from the fundus with a pedicle would not necessarily affect the size of the cavity, nor did he see how it could. Hæmorrhage was another source of error, for its absence in no wise authorised the inference that the case could not be one of uterine fibroid. In other words, there was no necessary relation between fibroid tumour and menorrhagia. Each case required to be looked at from all

points, and too much importance must not be attached to any one sign.

Dr. FENWICK said that as he had seen the last case mentioned by Mr. Reeves, he must say that he felt inclined to agree with him that the information which the sound generally gave of the presence of a fibroid tumour was utterly wanting. If on introducing the sound into the uterus one found that the uterus could be freely moved, and if the tumour could be clearly differentiated from the uterus, then of course, anyone would infer that the uterus was not connected with the tumour. That was exactly what took place in that case. The fact that the case had been under the care of skilled physicians, who had pronounced it to be fibroid, naturally made him all the more careful in his observations. He therefore made up his mind that if it were a fibroid at all it must be a rapidly growing one with cysts. The pedicle was nearly as long as the finger and about that thickness.

Dr. MACNAUGHTON JONES said the remarks that he had heard and read from time to time on the alleged danger attending the use of the uterine sound had very much surprised him. He agreed in the main with the remarks of Dr. Bantock. He could, however, quite understand the difficulty which would arise from the lack of any association of movement between the uterus and the tumour, but no obstetrician would rely upon the sole evidence of the uterine sound without having recourse to collateral signs and symptoms to clear up the question as to the nature of the tumour. The sound might be described as the third obstetrical finger, for it was not only the sound in the uterus, but it was the sound with the finger in the rectum, the sound in the bladder and so on. With proper gentleness and prudence he looked upon the sound as a highly useful instrument, and the results which had been attributed to the use of the sound were in reality due to its abuse.

Dr. HEYWOOD SMITH asked for more information as to the treatment adopted by Mr. Reeves in respect of the cervical stump. Did he sew the peritoneum over it? Did he take no

other precaution against hæmorrhage than the ligature of the uterine arteries?

Dr. INGLIS PARSONS said that he had very recently had occasion to call attention to another kind of fibro-cystic tumour before that Society. The case he had then described was very different from this one, but clinically they would probably be ranged in the same categories. A case like that treated by Mr. Reeves would, perhaps, not have continued to grow if left alone, and that was why they had not operated upon it at Chelsea. He had tried electrolysis in the treatment of this variety of tumour, but with much success, though when the tumour was undergoing degeneration they would naturally expect to get good results.

Dr. BANTOCK observed that it was all very well to expect good results, but did they get them?

Dr. PARSONS said that he could not at present reply to that question, but he hoped to do so at some future time.

Dr. BANTOCK, with reference to Mr. Reeves' suggestion to cut down and tie the uterine arteries as permitting of their treating the stump by the intra-peritoneal method, said that the very first case in which he removed a fibroid tumour from the uterus he had secured both arteries, and then put another ligature around the body of the uterus, dividing the uterus into a sort of double flap. He stitched these two flaps together, and in spite of that there was oozing from the stump enough to cause the patient's death, though the amount did not exceed an ounce. Consequently since that time he had never entrusted any, except the smallest pedicle, to the intra-peritoneal method. That case had led him to rely exclusively upon the extra-peritoneal method. He had enucleated the uterine body, securing the ovarian and uterine arteries separately, and then putting a *serre-nœud* round the uterine tissue, and it was extraordinary how much bleeding one got. The uterine arteries were not the only vessels supplying the body of the uterus, for there were twigs supplying the cervix, which furnished quite enough blood to carry off the patient, unless proper precautions had been taken. He

thought that, in spite of all that had been said to push forward the intra-peritoneal method, the extra-peritoneal method would ultimately be found most saving of life. With regard to the mortality after the removal of fibroid tumours, it was very unfair to hysterectomy, by whatever method, to contrast it with ovariectomy. If they got their hysterectomies as simple as the ordinary run of ovariectomies, then the mortality might be expected to be about the same, but as a matter of fact no such comparison was possible or ought to be attempted.

Mr. REEVES, in reply, said that Dr. Bantock might take it for granted that he would not rely solely upon the evidence afforded by the sound in arriving at a differential diagnosis. Personally, he had a strong bias against the sound, but he always endeavoured to divest himself of any such prejudice when he thought that any good was to be derived. Therefore he had ventured to use an instrument in which he was not an adept, and that being so, when he was at fault he called in more skilled persons, but the result had always been either to mislead him or to afford information which was amply provided in other ways. Hence he maintained that the sound was of little assistance in diagnosis. His cases of the intra-peritoneal method were only few in number, but he maintained that if the arteries were properly tied, not a drop of blood would escape. He did not attempt to bring the peritoneum over the cervix, and he had left the cervical canal open to the peritoneum. He doubted whether Dr. Parsons would succeed in inducing these solid masses to contract by electricity. He said he had omitted to mention that Dr. Fancourt Barnes had seen the case before it came into his hands, and had diagnosed fibroid tumour, but he had declined to interfere, on the ground that an operation was neither necessary or desirable.

Dr. MACNAUGHTON JONES said he wished to make a few remarks in regard to a statement that had been made at their last meeting, that epithelioma of the uterus, if not altogether

a disease the existence of which might be disputed, was at any rate extremely rare. He had heard that assertion with surprise, though he was aware that a good deal of discussion had arisen as to the origin of epithelial disease in the cervix. He said that Dr. Galabin, after a large number of researches, had come to the conclusion that ordinary epithelial growth, arising in the cervix, was rare, and that tubular proliferations of epithelium was one of the rarest forms in which carcinoma attacked the cervix. He did not speak as a pathologist, but as a clinical observer. He had a specimen among others of a case of high vaginal amputation, and these specimens, which were mounted by his friend, Dr. Abrahams, were interesting, as showing the orthodox origin of epithelial cancer from the lining membrane with the tubular proliferations and the cyst. The two sections were taken from the same specimen. He read the report on the sections drawn up by Dr. Abraham, and said that he thought not only gynaecological histologists, but general histologists, agreed in regarding the cervix as a typical site for epithelial cancer. He was surprised to hear Mr. Reeves say that epithelial nests were not to be taken as indicative of epithelioma, but he had always regarded this arrangement of the cells surrounded by connective tissue as typical of that form of cancer.

Mr. REEVES observed that his remark only had reference to the cells and not to the arrangement of the connective tissue—the significance of which was quite another thing.

Dr. MACNAUGHTON JONES said that thus restricted, Mr. Reeves' observation ceased to have any importance. Of course microscopical evidence ought always to be backed up by that of clinical observation.

Dr. Macnaughton Jones also showed as a curiosity a pessary, which had sojourned in the vagina of a lady forty-six years of age, from May, 1880, until October, 1889 (nine years). When he removed it, the lumen was completely occluded by a sort of calcareous matter, and it had caused marked erosion of the cervix, with patches of ulcera-

tion of the vaginal walls. The lady recovered promptly under ordinary treatment. He observed that medical men were not always careful enough in instructing patients as to the necessity of removing pessaries from time to time.

Laparotomy followed by Fæcal Fistula and Tetanus. By
E. SINCLAIR STEVENSON, F.R.C.S.Eng., Rondebosch,
South Africa.

Mrs. R., æt. thirty-five, primipara, three abortions. A stout pale-looking woman, consulted me in February, 1888. She had been sent to me by her medical attendant to see if electrolysis could do anything to ameliorate her condition.

She had been ill for fourteen months, suffering from acute pain in the pelvic regions, severe when walking and increased during menstruation. The periods lasted fourteen days, during which time the loss was excessive. She was very anæmic, almost blanched, suffering from palpitation, shortness of breath and other symptoms of severe and continuous hæmorrhage.

Internal Examination.—A mass, the size of an orange, intimately connected with the uterus could be felt, filling Douglas's pouch, dragging the fundus backwards, the two moving together.

As I was leaving the colony I was unable to do anything for her. I saw her again on my return.

She has been losing much blood, the hæmorrhage was much more profuse than before. 'The growth was not much larger, but the anæmic symptoms were urgent. She was admitted into the hospital to be treated by electrolysis. It was found very difficult to pass the intra-uterine electrode on account of the acute flexion and tortuous course of the cavity. A positive current of 150 milliampères was passed for ten minutes, and repeated on several occasions, but the pain and distress it caused was so great that the patient begged me to discontinue the treatment. There being no improvement in the hæmorrhage, I tried the direct application of a trocar, introduced directly through the posterior vaginal roof. This gave less pain, but had no effect on the hæmorrhage.

She was kept entirely in bed and the tincture of *hydrastis canadensis* in thirty minim doses, was given three times a day. By this time the patient was very weak, fainting whenever sitting or even moving in bed.

On the 27th I operated, assisted by Drs. Baird and Falkiner.

Operation.—Abdominal walls very fat, uterus retroflexed with a growth in its posterior wall. On the right side the uterine growth and appendages seemed to be merged into one mass, on the left the ovary and the tube could not be felt. With the greatest difficulty the right ovary and tube were separated from the surrounding structures and cut off, great force being required to tear off adhesions. The uterus and growth were lifted out of the space where they had been incarcerated, and as much as possible anteverted; another trial at finding the left appendages, failed. On account of the large amount of fat in the patient's abdominal walls, special care was taken in sewing up the wound; flat sponges being used to protect the intestines and bladder, this latter was much enlarged, and although empty reached up to the lower third of the incision, and narrowly escaped being cut into. The patient remained in a collapsed condition for some hours. *Metrosaxis* continued for five days, severe at first, but gradually lessening. The patient suffering from *dyspnœa* and *syncope*.

On March 3rd, the dressing had to be changed, a nasty thin offensive discharge soiling the wadding, necessitating frequent changes.

4th.—Discharge *fæcal*, the wound, although frequently irrigated, looked angry, and the stitch holes inflamed.

5th.—All the stitches had given way, wound gaping, moulded *fæces* escaping at the lower part of the wound, a coil of intestine was kept with difficulty from escaping.

7th.—The muscles of the neck became stiff, completely fixing the head in one position, the teeth became clenched, and the tetanic spasm of the *recti* muscles on each side of the wound came on. These contractions could be always assisted by dressing or touching the wound, and also

were induced by a current of air, or by excitement. The muscles could be seen contracting, and separating widely on each side of the wound, appearing like two bolsters. The spasm extended down the legs and up to the arms. This state of things lasted for about fifteen days. Food was given by enemata, and by the mouth through an opening caused by a missing upper molar. The treatment was very simple, and frequent irrigation with sanitas and lint; clearing frequently the lower bowels with enemata, and ten grain doses of chloral hydrate given every four hours.

At this time being disabled from looking after the patient, Dr. Baird kindly took charge of the case, and when I saw her again she was much better. The wound was discharging little, and granulations were growing on and bridging across the gap. Finally, three months after the operation, Mrs. R. left for home in every respect a strong and healthy woman.

July 8th.—Mrs. R. has reported herself to me on several occasions. She states that she feels well and strong, has no pain and menstruates regularly every four weeks, that it lasts four days, and that she is able to attend to her business and household work. She has lost her anæmic looks, and has a good colour. Per vaginam the growth was found high up and has not fallen back.

Remarks.—There are several points which are of interest in this case.

1st. The cause of hæmorrhage and pain. There is no doubt that the pain was due to the myoma, and the excessive pain to the impaction of the growth and to the diseased state of the ovary and tube, which were all glued together and jammed down into the pelvis. Not knowing the state of the annexa previous to the exploration, I intended removing the appendages in view of checking the growth and lessening the hæmorrhage; then to lift up the uterus and relieve the pressure, and if necessary to fix the uterus to the anterior abdominal walls. I found that the strain would be too great to do so with advantage and safety, so limited myself in lifting up the growth and liberating it from pressure. This seems to

have answered the purpose, for at the last examination which I made the growth had not fallen back in the *cul-de-sac*, nor will it ever, for if it enlarge it cannot fall for want of room and now that the diseased and painful parts are removed, the growth can always be kept up by a well-chosen support.

A fair trial was not given to the treatment by electrolysis. I have given the reason why I desisted. Besides, although intra-mural myomata are the kind of tumours which are likely to be cured by the Apostoli's method, the condition of the appendages, and the incarceration of the growth were complications which to my mind would have ensued.

Now we come to the next point of interest: The fæcal fistula in the wound. How did it originate? There are many cases of fistula on record. Formerly they were more frequent, especially when clamps were used. In my case I think that all the trouble was caused by a pin hole perforation of the bowel made by the suturing needle, although special care was taken in protecting the intestines by using flat sponges; the depth of the wound made it unusually difficult to approximate the edges.

Had the tear been caused by the force used in freeing adhesions, the intestinal contents would have in all probability escaped into the peritoneal cavity, whilst in that case the fæces escaped into the wound, and that a few days after the operation again the puncture gradually increased into a large perforation, as seen by the large quantity of moulded fæces which escaped. It is more than probable that, besides the pin probe perforation, the bowel was sewn to the abdominal wound, and that the silk loop tore through it, causing the perforation, when fortunately the gut had already become adherent.

Lastly, we come to the tetanic convulsions. Whether these were due to some special conditions caused and kept up by the unhealthy discharge, I do not profess to know. Very little is said of such complications in the text-books on abdominal surgery. Sir Spencer Wells says that in his practice four cases occurred in 1,139, a little more than one in 270. In four hundred cases collected by Dr. Lyman one case oc-

curred. Oldshausen has twenty cases after ovariectomy with one recovery only. The conclusion arrived at is, that there is no pathological condition connected with the operation which causes the disease, further than giving the same predisposition which would come from a common wound.

On account of the tetanic convulsions the healing of the wound could not be expected. Intending to perform a plastic operation later on I was met by nature more than half way, and with such results far surpassing my expectations.

Dr. BANTOCK said he was not satisfied that the author's explanation of the cause of the fæcal fistula was correct. He thought the author was mistaken in attributing the fistula to puncture of the large intestines in passing the sutures through the abdominal walls, for if he had touched intestine at all, it would have been the small, and not the large intestine, which never came into evidence at that point. It was much more probably inflicted during the process of healing. He was fortified in that opinion by some experience of his own in a case from which he had removed a hydro-salpinx from the left side, in which he had left in a drainage tube. Everything went well for three days, and he removed the tube. Three or four days later the patient had a rise of temperature, and the tube-hole reopened, and in the course of a day or two it became quite evident that the discharge was of a fæcal character. In fact, solid fæces passed. Ultimately the fæcal fistula closed, and the patient got well. He pointed out that if the connection had been with the small intestine, in that case there would have been no real fæcal matter, since the contents of the small intestines were not, properly speaking, fæcal. The question of the tetanus was very interesting. It was much rarer as a complication now than formerly, and he had only seen one case in the course of eight or nine hundred abdominal sections. In that case the patient had been doing very well, and had been put in the convalescent ward. There she complained of being in a draught, which caused stiffness of one side of the jaw, culminating in tetanus. He was away at the time, and only arrived in time to see her die.

Dr. FANCOURT BARNES said he had had only one case of fæcal fistula, and the difficulty was to make out the cause for it. He had been utterly unable to elucidate this question. It was after the removal of a pedunculated fibroid—an operation which presented no sort of difficulty, and he was certain that neither his hands nor his instruments had been anywhere near the intestines. She did very well for a fortnight, and had apparently recovered, when suddenly she became feverish, and fæcal matter began to ooze out of the wound, which had closed over. She died, and *post-mortem*, no cause could be found by the pathologists to account for the fistula which was in the rectum. He had brought the case before the Society, and had asked for an explanation, but he thought that they must seek some other cause than that of injury to the gut.

Dr. INGLIS PARSONS said that it was quite possible that adhesions might have formed between the intestines and the parietes in Dr. Stevenson's case.

Dr. BANTOCK insisted upon the fact that it would be very difficult, if not impossible, to wound the large intestines from that position, and added that the contents of the small intestines was quite different from that of the large intestines.

Observations on Pelvic Abscess. By RICHARD T. SMITH, M.D.Lond., M.R.C.P.Lond., Physician to the Hospital for Women, Soho, London.

To every worker who takes a genuine interest in the medical art, it must be a great pleasure to recognise the great advances that are being made in the treatment of abscesses in deep-seated regions, or in the cavities of the body ; and in the restoration to health thereby of patients who hitherto have been condemned to protracted, and often fatal, illness. Nothing gives me greater satisfaction than to witness the conquests made in other departments of medicine and surgery by those who used to sit by my side in the lecture room and wards of the hospital, as, to wit, in the treatment

of empyema ; in the brilliant diagnosis of abscess of the brain and its location, enabling the surgeon to trephine and cure ; and in the treatment of abscess of the kidney.

In this advancement we equally share ; nay, I am not sure I say anything extravagant when I affirm that the success which has followed the treatment of inflammatory pelvic disease (to speak in broad terms), by abdominal section and drainage, prompted our *confrères* to more vigorous surgical action in their departments. This need not stir the envy of our medical brethren, for, as I am about to show, the wise use of this newly-gained therapeutic measure will be attained only by careful clinical observation. Just as in abscess of the brain, the skill that is needed to localise the seat of mischief must be joined with the practical aptitude of the surgeon, so in pelvic diseases we needed careful clinical observation combined with dexterity of operative interference. In short, the two faculties re-act on each other, and we need not waste any time in attempting to adjudicate the relative ability of one or the other.

It would be a most valuable piece of work if any Fellow of this Society would take the trouble to collect together and arrange in systematic order the contributions made to this subject during the last few years by the cases that have been recorded, and the specimens that have been exhibited ; and it seemed to me that as a preliminary to the discussion on Pelvic Abscess, it would be useful if I briefly suggested some points for definite consideration.

On perusing the titles of the cases in Mr. Robson's paper, I find they include a wide range, for instance, from pelvic cellulitis to pelvic abscess combined with tubercular peritonitis, and this is an exact illustration of the position of this question when approached from the diagnostic point of view. When upon making an examination we find a pelvic lump, we naturally try to elicit from the patient whether she has had an attack of "inflammation of the bowels," or of "internal inflammation." These being the ordinary names given, I think, by almost all practitioners to that congeries of symp-

toms by which these pelvic inflammations, whatever their origin, are characterised.

This is our starting point. The second one is to determine, if possible, into which of the two kinds of pelvic inflammation the case falls; whether it is in the cellular tissue lying between the layers of the broad ligaments and other supports of the pelvic viscera; or whether the serous surfaces are inflamed with the probability of the agglutination of intestine to intestine, or of the various pelvic viscera to intestine or to each other. Now these two varieties are as real and definite as pleurisy and pneumonia; different in nature, different in issue; that they may co-exist we know very well, even as there is pleuro-pneumonia, but after the brunt of the inflammatory attack is over, and in some cases, as for example, in abscess of the ovary before that time, the method of treatment that is needed will be quite different. Now it is in the elucidation of the second variety of pelvic inflammation (not in its discovery, for that we owe in great measure to Bernutz and Goupil), that so much progress has been made of late years, and for that advance by no means the least amount of credit is due to the Fellows of this Society. The part played by diseases of the tubes and ovaries in the causation of this inflammation, and also in actually constituting it in some cases has received constant attention and illustration, to the great advantage of the subjects of these diseases. As far as I know, no case has been recorded of peri-uterine adenitis, or abscess in the lymphatics and glands of the pelvis, which lie behind and to the sides of the cervix, as described by Courty, and which he attributes to ulcerative endometritis, and considers to be of such serious moment in puerperal cases. This condition probably bears a close relationship to the condition of purulent phlebitis found in the puerperal state, and explains the rapid and hitherto unremediable fatality of some of these cases. Some observations on this subject would be most valuable.

Excluding this last variety, we may say in general that

"pelvic abscess" is one termination of circum-uterine inflammation, which varies both in its causes and in the forms it assumes; when due to pelvic cellulitis or parametritis it constitutes a true phlegmon; when due to pelvic peritonitis it takes the character of an encysted effusion, in the midst of which may be intestine or a Fallopian tube or an ovary, or all three combined.

The cause of the former is most commonly through the medium of the uterus, as by the process of labour with its possibility of causing contusion and bruising, and with the liability to absorption of septic matters through its sponge-like tissues; so also after operation on the uterus, or from a chill caught during menstruation.

On the other hand pelvic peritonitis results more frequently from affections of the Fallopian tube and ovaries, the symptoms are more than those of peritonitis, and I have a strong suspicion in my own mind that the fatal cases of "inflammation of the bowels," which not infrequently occur in young girls, are due to a precedent disease in the tubes, and that an examination of the pelvic viscera should be made.

In both cases the abscess constitutes a swelling, from the character of which some suggestions, if not actual inferences, may be derived. (1) *Size*. The degree of this is not of much value, in both cases the swelling may attain very large dimensions. Our journals are very instructive in this particular and also in showing that tubes distended with pus or serous fluid may attain considerable proportions. Dr. Bantock, Dr. Aveling and Mr. Tait have shown several. Dr. Aveling showed one most remarkable case in which a pyo-salpinx reached the umbilicus, and in which there were no premonitory symptoms of inflammation whatever.

(2) *Character*.—Pelvic cellulitis may, as a rule, be said to be diffuse, it has no definite boundary, may feel as though it was a part of the pelvic wall; it has also, as a rule, its preliminary wooden or ebony-like hardness. The tumour of pelvic peritonitis may be very hard, but it has a border,

which gives it a round or oval form, and frequently a groove may be differentiated between the swelling and the uterus.

(3) *Site in Pelvis.*—In general the abscess due to pelvic cellulitis being bounded below by the pelvic fascia, occupies a lower place in the pelvis. The lower margin of a pelvic peritoneal swelling may be at the vaginal vault, but it may, in some instances, occupy Douglas's pouch.

(4) *Effect on Uterus.*—Speaking broadly, the uterus retains its central position in cellulitis, but is moved laterally or forward or backward in the other form of inflammation.

The mode of termination also presents a fairly well defined difference. The abscess of pelvic cellulitis tends to follow the lines of the uterine supports along the interstices of the intra-ligamentous connective tissue, and accordingly points to the abdominal wall, if of any size, or to the groin; and is, moreover, more active in its tendency to make a way to the exterior of the body; the encysted purulent effusion will often be tolerated a long time (in one case I had, as far as we could ascertain, the swelling had existed four or five years), and when it bursts, the route it takes is frequently through the rectum or bladder. On this fact I would lay great emphasis as a reason for aspiration or abdominal section, as may on other grounds be decided upon, no cases being more miserable and difficult to alleviate than a chronic pelvic abscess with a communication with either of these viscera. As a natural termination of these two kinds of abscess, it is also worthy of notice that the cure in pelvic parametric abscess is often absolutely complete, and the reparatory process perfect. I have known several instances in private practice where the subject of pelvic abscess, some before marriage, have had straightforward and healthy labours without any return of the pelvic mischief. Only this week a lady, who, two years ago, barely escaped with her life from cellulitis followed by abscess on the right side in her confinement, has been safely and easily delivered of a male child, and I hear from her doctor is doing well. How great a risk hangs over the subjects of

chronic abscess or inflammatory disease due to implication of the peritoneum was most impressively laid before the Society in a paper by Dr. Grigg, where fatal puerperal inflammation was traced to the existence, at the time of labour, of (1) an old pyo-salpinx, (2) of an abscess of the left ovary, and (3) of chronic inflammation of the broad ligament and Fallopian tubes.

The enumeration of the diseases which are concerned in originating pelvic peritonitis, and which participate in it as constituting a tumour, would make this paper far too long; moreover, we have to confess that, with all the experience that has been gained, it is impossible from the histories to form a correct diagnosis of the pelvic lumps, which may be simple enough, being only a small ovary, a dermoid, or a hæmorrhagic ovarian tumour; but on the other hand, may consist of a tube full of pus, or an ovary converted into an abscess and comparable in danger to a hidden volcano. I have seen in my own practice a case where menorrhagia of some months standing was associated with a small abscess of the ovary, never felt, never suspected, but which, by bursting, destroyed life in a few hours. And I have known of a similar instance in another doctor's practice. It may be a bit of pleasantry to say some gynecologists look inside to see what is the matter, but in reality it conveys a very important truth that the keenest diagnostic acumen and widest experience most scientifically utilised has not yet proved equal to the task of unravelling the spider-like web in which these pelvic organs become involved.

I must leave it to other Fellows to refer in the discussion to pelvic abscesses due to tubal disease—diseases of the ovaries—as blenorrhagic or tubercular, the probable origin of tubercular peritonitis in tubercular tubal disease, and to abscess the result of hæmatocele.

But I would just refer you to a latent form of pelvic abscess which may assume a very large size, almost without symptoms. The first case was in a teacher of a large school, single, æt. twenty-three. For three weeks she had been

under the doctor for slight pains in the abdomen, but travelled to London about thirty miles, and two days after this I saw her. On my first visit I cursorily diagnosed it as a case of simple colic, as she did not seem ill; but the day following, seeing a hectic flush, and finding the lower half of the abdomen a little tender and tumid, I made a vaginal examination, and found a huge pelvic elastic swelling pointing downwards in Douglas's pouch. A few days later, by the aspirator I drew off, *per vaginam*, four pints of pus. This was the only aspiration. A week later she had a sharp rise of temperature, but it soon subsided, and she was quite well in six weeks. I mention this because it is an illustration of the fact that in some cases a single aspiration cures an abscess, but we cannot rely on such a result, and my practice is now to drain.

The second case occurred last year in a single girl of very strumous build, æt. twenty-one. Her mother brought her to me on account of her failing strength and pallor. She was a perfect specimen of chlorosis. Menses natural and without pain. I gave her the ordinary medicines, but finding in a month there was no improvement, I made inquiries as to pelvic symptoms, but found none, except that she said that at the beginning of her illness she had some trouble with the bladder. On making a rectal examination I found the uterus low down, surrounded with a tense elastic swelling, which entirely subsided on aspiration, except the induration immediately around the uterus. The pus was most offensive, and the summit of the abscess was three inches above the pubes. There had been no marked pain or vomiting, or abdominal distress of any kind. Recovery was protracted, extending over six months, and drainage was very difficult. The pelvic fascia constitutes a difficulty in these cases, being very rigid, and the mucous membrane glides over to some extent, and so a kind of valve is formed, the openings in two membranes not being opposite to each other. I find elastic tubing of no use in these cases; the tube must be rigid, either celluloid or glass. For the lotion nothing is superior to

iodized phenol, about one drachm to four ounces of water, and as the abscess contracts to a sinus the iodized phenol may be applied pure on a Playfair's probe with great advantage. Unfortunately, as I have said, with all our knowledge, and with the broad line of demarcation that exists in a pathological point of view, we cannot in individual cases be sure of the exact nature of these pelvic abscesses, or the rules of practice might easily and correctly be enunciated. Aspirate [pelvic cellulitic abscesses by vagina and drain. For abscesses involving peritoneal surfaces open the abdomen and act according to condition found. For example, cases are on record, such as one (see p. 436, November, 1886), where an abscess of the ovary had perforated into the vagina, and thereby simulated the abscess of an ordinary pelvic cellulitis. Here, as the ovary was adherent to the pelvic floor, free incision and irrigation through Douglas's pouch might have answered very well; but there is a marked degree of uncertainty in this method of treatment. Still, it is a very fair question: Have we sufficient faith in the reparative power of nature in such cases? Might not drainage be tried as well as ablation of the viscera affected?

Sir James Simpson records in his work a case of chronic pelvic abscess, which had burst above the groin, and by the continued discharge had reduced the patient to a state of extreme emaciation. Passing a probe several inches downwards, he found its point by a vaginal examination close to his finger, and, to the horror of his colleague, cut through the vaginal wall, and established drainage throughout, with the happy result of a speedy and complete cure.

The gain we have now procured is the knowledge that by laparotomy we may gain exact information of the nature of these abscesses, numerous as they are in character and causation, and drain them safely by the abdomen, if only found to be chronic abscesses, and at the same time remove the tube or ovary, which by some diseased condition or other has been the essential cause of the abscess.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, MARCH 12, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

Present : 25 Fellows, 9 Visitors.

Mr. REEVES showed a tumour which he had removed and which he had thought it well to bring before them at once in order that they might see it in the fresh state. Before operation they had diagnosed it to be a Rokitansky's tumour. This condition was nearly always double. His tumour was a large one and he had to tap a good many of the cysts before he could remove it. There was practically no solid matter except the cyst walls. It might be a form of Rokitansky's tumour, but unilateral. He alluded to a curious phase of hospital experience. At their last meeting he had brought before them a case of fibroid of uterus in which he had operated successfully, after the patient had been discharged from the Chelsea Hospital, where they did not think it desirable to operate, and the patient from which the present specimen was taken had at first refused to allow herself to be operated upon, because she had been advised by her doctor in Cornwall not to consent to any operation. He had written to this gentleman and had learned from him that his advice was based on the fact that having sent her to the Samaritan Hospital for the express purpose of undergoing an operation, she had been dissuaded by Mr. Knowsley Thornton, who declined to operate, hence he (the medical man) had thought it his duty to disengage his responsibility in regard to any future operation. The size of the tumour necessitated a long incision, but the patient made a rapid and uninterrupted recovery. The pedicle was twisted several times on itself.

Dr. MACNAUGHTON JONES exhibited some microscopic sections of fine tubular epithelioma of the cervix. Dr. Abraham had sent him this report of the growth which was removed by a high vaginal amputation, the patient surviving fifteen months after the operation: "The growth is a typical example of epithelioma, anastomosing prolongations, tubular and irregular, extending from the surface epithelium of the os into the subjacent tissue (Fig. 1). In several of these epithelial encroachments, centripetal collections of young cells—the so-called 'nests'—are formed (Fig 2), or in process of forming. In some of them the central (newest) cells are very large, succulent and rapidly dividing. In the tissues, fibrous and muscular, which surround the heterogeneous epithelial ingrowths, the usual small celled inflammatory infiltration, characteristic of their malignant growth is evident in several places.

Cases of Pelvic Abscess treated by Abdominal Section. By A. W. MAYO ROBSON, F.R.C.S., Hon. Surgeon to the Leeds General Infirmary; Hon. Consulting Surgeon to the Batley Hospital; Lecturer on Practical Surgery at the Yorkshire College, and Examiner to the Victoria University.

ABSCESSES situated in the pelvis frequently offer very unfavourable conditions for rational treatment, since the abscess cavity either cannot be safely reached, or if reached, is with difficulty cleared out and drained. These considerations have so influenced gynæcologists that the great majority of them in such cases are content with expectant treatment, although the feasibility and safety of opening the abdomen, searching for, emptying, and draining such cases has been proved by Mr. Lawson Tait and others.

The pelvic abscesses referred to below, have nothing to do with lumbar, psoas, and other collections of pus, which have distinct origins outside the pelvis, but are to be considered as

Microscopic Sections of Fine Tubular Epithelioma of
the Cervix, Exhibited by
DR. MACNAUGHTON JONES.



Fig 1.

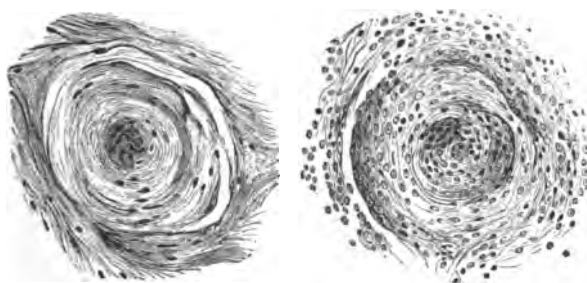


Fig. 2.



mere sequels to certain diseases, such as pelvic cellulitis, pelvic peritonitis, and hæmatocele, or to ovaritis, salpingitis, or breaking down of tubercle. The one thing common to them all being the presence of pus in the pelvis.

Every surgeon knows the course pursued by such collections, their tendency towards continuous or intermittent evacuation into hollow viscera, either vagina, rectum, or bladder; or by long circuitous fistulæ on to the surface; the violence of the inflammatory storms which occur at irregular intervals after a delusive period of quietude; the condition of impotency or infirmity in which they leave women, even after a spontaneous cure, which always demands a very long time; and their frequently fatal termination either by the pus bursting into the peritoneum and setting up acute peritonitis, or by the constant discharge bringing on hectic fever; or more indirectly by the supervention of tuberculosis or amyloid degeneration. There are some fortunate cases where the abscess projecting into the vagina, allows an opening to be made and drainage to be effected, but these are exceptional; in the greater number it is impossible to discover by the touch a fluctuating point in the hard plastic mass which fixes the uterus. Even if the abscess can be opened by the vagina or rectum, it is a most difficult matter to keep the cavity aseptic and to secure efficient drainage.

If, then, expectant treatment is so unsatisfactory, what other means have we at our disposal? Firstly, *Aspiration*, which according to Mundé is a successful mode of procedure. In several cases where there have been small and localised abscesses, I have found this simple method efficient, but it is uncertain in large, and useless in multiple abscesses, and its indiscriminate use is not unattended with danger, for it must be borne in mind that important structures often overlie the tumour and have to be pierced before it can be reached. Secondly, *Sub-peritoneal laparotomy* as performed and advocated by Dr. Pozzi, of Paris, of which Case III. is an instance. It would seem to me, however, that this method can only have a very limited application, and can only be safely adopted where

there are signs of the abscess approaching the side of the pelvis, as in the example I have mentioned. And lastly, *Abdominal section*, of which the other cases form good examples.

CASE I.—Pelvic Abscess discharging into Rectum for six years, opened and drained anteriorly through the Peritoneum.—Cure.

Mrs. A., æt. twenty-nine, consulted me in July, 1886, saying that she had been married five years, but that she had had no children. About three months after the marriage, during a menstrual period, she caught a chill when at a picnic, and was seized with a severe pain on the left side of her abdomen : this was followed by a serious illness, which kept her in bed for three months, at the end of which time the abscess burst into the rectum, giving immediate relief to her urgent symptoms, but leaving a persistent discharge of pus, which during the whole period of four years before she saw me had never been less than from one or two ounces a day. She had had feverish attacks from time to time, accompanied by severe pain in the lower part of the abdomen, especially on the left side. From having been a stout, good-looking, rosy-cheeked woman she had become thin, pale, and cachectic. Night sweats and a short cough made her friends fear that phthisis was developing, and she spent the winter of 1886 at Bournemouth without receiving any very material benefit, as the discharge from the rectum was as free as before. Her menstrual periods, normal and painless before her inflammatory attack, had since been preceded for several days, and accompanied by pain on the left side, often of an agonising character. During 1886, difficulty in defæcation came on, so that aperients were regularly required, the motions being flattened and not larger than the little finger. On vaginal examination a tumour could be felt on the left of the uterus, the size of a large orange, which was firmly fixed to the uterus and to the contiguous parts. Bimanually it could be felt above the pubes, but did not form a tumour evident to the eye. The right appendages felt perfectly normal. The uterine sound passed the normal distance.

On examination by the rectum, within reach of the tip of the index finger, a stricture could be felt, which would only admit a small rectal ball the size of a large pea; above this stricture the abscess cavity evidently opened, but the opening could not be felt by the finger.

As all forms of medical treatment had been fully tried before the patient consulted me, and as there seemed to be no chance of approaching the abscess from below, I advised that the abdomen should be opened, and the abscess evacuated in that direction, as the opening into the rectum was situated in such a position that the sac of the abscess could never empty itself; and, moreover, the constant irritation threatened soon to produce complete obstruction of the bowel by the contraction of the stricture.

The patient and her friends took a long time to consider before they would entertain the idea of operation; and it was only when they saw that matters were going from bad to worse that they consented. Mr. Pridgin Teale saw the patient with me in December, 1887, and agreed with the opinion I had given.

In January, 1888, the patient being under the influence of ether, an incision of three inches was made in the left linea-semilunaris across the course of the left deep epigastric artery, which was exposed, doubly ligatured and divided. On opening the peritoneum, the small intestines were pushed upwards exposing a hard mass intervening between the uterus and the left side of the pelvis, the tumour appearing to be continuous with both. Sponges were packed around so as to avoid soiling the peritoneum, and an aspirator needle was pushed into the centre of the swelling, when at the depth of one and a-half inches it reached the cavity, from which was abstracted several ounces of extremely offensive pus. The parietal peritoneum was pressed down and sutured with catgut to the peritoneum around the opening into the tumour; the incision through the parts above and below the opening being closed by silk sutures. A large aspirator needle was left in the abscess to act as a drainage tube, salufer lotion twenty grains to the pint

being used to thoroughly cleanse the cavity. Sal alemboth gauze was packed round the opening, and over this was applied a dressing of salufer wool. The temperature never rose above normal; and after the first dressing no odour was observed from the abscess cavity, which was syringed out daily with the antiseptic lotion. The stitches were removed on the eighth day. On the seventh a large drainage tube was inserted into the abscess cavity, the capacity of which had contracted from four to one ounces in the seven days.

Although on syringing the fluid returned clear, a celluloid drainage tube, the size of a No. 12 catheter was retained until the fourth week, when the cavity would not hold more than two drachms of fluid, which returned as clear as it went in. The tube was then left out, and the wound healed forthwith. No fæces ever came through the drainage opening, and after the first dressing no flatus passed through it. The patient was up on the fourteenth day, and during her stay in bed had gained flesh and colour. Menstruation occurred normally on the nineteenth day, and absolutely without pain.

From the time of operation no pus was ever seen on a motion. In June, 1888, Mrs. A. reported herself as being in absolutely perfect health. Menstruation was normal and painless; her bowels were opened regularly and without the aid of aperients, the motions being of full size, and free from pus or blood. On examination a full-sized rectal bougie passed without hindrance, and no remnant of the tumour could be felt on the left of the uterus, which seemed to be normal in size, position, and mobility. The patient had gained two stones in weight, and looked the picture of health.

CASE II.—Pelvic Abscess discharging into Ureter—Catheterisation of Ureter—Exploratory Nephrotomy—Subsequent Laparotomy and Evacuation of Abscess—Recovery.

Mrs. J., æt. thirty-four, was admitted to the Leeds General Infirmary on June 18th, 1886, with the history of having during the previous nine months suffered from the passage of a large quantity of pus with the urine, with severe pain on the right side of the lower part of the abdomen extending

along the course of the right genito-crural nerve. She had been ill for some time previously, and had suffered from a severe leucorrhœal discharge. Although her menstrual periods had been quite regular as regards time, they had been excessive, and had been preceded by pain for several days. Micturition had not been frequent, but had been somewhat painful during the act.

On admission, the urine, which was passed with pain about six times during the twenty-four hours had a specific gravity of 1.024, was alkaline, very offensive, and contained about a fourth part of greenish pus with a few granular casts. There was slight tenderness in the right loin, and on vaginal examination a tumour the size of a large orange was felt on the right of the uterus. On sounding the bladder nothing abnormal could be discovered.

On June 24th, the urethra was dilated, and the ureters catheterised, when clear urine was drawn from the left, and purulent offensive urine from the right. It was therefore thought that the pus was proceeding from the pelvis of the right kidney, and after washing out the bladder with a 1 in 10,000 perchloride of mercury solution, nephrotomy was performed, but the exploration showed the kidney to be healthy. The wound was therefore closed, and union occurred by first intention. As the source of the pus was manifestly not from the kidney it became evident that the tumour felt on the right side of the uterus was a pelvic abscess discharging into, or by the side of, the right ureter. This was fully explained to the patient, who, after an interval of six weeks, during which time the pus rather increased than diminished in quantity, consented to a further operation, and the abdomen was opened in the linea alba for the purpose of either removing the disease or draining the abscess. It was found, however, impracticable either to bring the wall of the abscess forward or to safely incise it, for the intestines were firmly matted over the whole roof of the pelvis. Aspiration was therefore performed, the abscess emptied and washed out with borax lotion, and the abdomen closed. The patient



made a steady recovery, and from that time forward began to pass less and less pus with urine. She returned to her home in America, and six months afterwards wrote to say that she was strong and well, and was doing her household work.

CASE III.—Pelvic abscess discharging per rectum for six years—Pulmonary and abdominal phthisis—Sub-peritoneal Laparotomy and evacuation of pus and Caseous material—Relief.

Several years ago I was called to see Miss A., æt. twenty-one, on account of pelvic trouble, and was told she had been more or less of an invalid since the age of fifteen, when she begun to menstruate. On the second occurrence of the menstruation she caught a chill after a warm bath, which caused suppression of the menses, this being followed by some so-called inflammation of the bowels. An abscess formed and burst into the rectum in about three weeks. She very tardily regained her strength, and three months after the first attack had another return of the inflammation followed by the bursting of a second abscess. Menstruation did not recur for six months. The inflammatory attack was repeated at the end of a year; and between that time and my seeing her, she had had two other attacks.

When I saw her she was very much attenuated and had a hectic flush on her cheeks, there was a slight cough and some question of commencing tuberculosis in the right lung, her chief complaint, however, was in the pelvis; and on examination per vaginam, the uterus was found to be firmly and immovably fixed in the centre of a hard mass, which reached about two inches above the pubes; there was great tenderness on the left side, but no fluctuation could be felt through the roof of the vagina. Per rectum, the induration was found to extend quite round the bowel, so that two inches from the anus the finger passed through an indurated stricture. There was considerable difficulty in defæcation, and the motions were at times coated with thick offensive pus. Pain and frequency of micturition were complained of. As there seemed to be some doughiness deeply above the left Poupert's ligament,

I decided to try to find and evacuate the abscess in that direction, and having made an incision as if for ligature of the external iliac, I raised the peritoneum without opening it and passed my finger down the inner side of the pelvis, soon reaching an extensive collection of caseous material with a little pus; this I carefully scooped away with a Volkman's spoon, then thoroughly irrigated the cavity with a mild antiseptic lotion and inserted a large drainage tube. Decided relief to the symptoms was given, the pain was lessened and the hectic diminished, but although the local symptoms were so much benefited, the chest did not improve, and the patient in three months died of phthisis. Had this radical treatment been followed out before the event of tuberculosis, I have no doubt that cure instead of relief would have ensued.

CASE IV. — Pelvic abscess — Tubercular Peritonitis — Laparotomy—Evacuation and drainage of abscess—Relief.

J. G., æt. twenty-four, was admitted to the Infirmary on February 1st, 1888, on account of a pelvic and abdominal tumour accompanied by peritonitis; the family history was good, and there had been no previous illness. Menstruation commenced when the patient was sixteen years old, and had always been regular. She had been married twelve months but had not been pregnant. Six months prior to her admission she was seized with a sudden and violent pain in the lower part of her body, but she did not faint; from that time onwards the pain had continued, being worse at her periods. There had been great frequency of micturition with considerable pain, although the urine on admission was found to be healthy. There had been pain on defæcation, with straining, but neither pus nor blood had been noticed on the motions. During the whole of the time the patient had been getting much weaker and thinner, and for some weeks she had been completely bedridden.

Examination per vaginam, revealed great induration at the roof, and fixation of the uterus in an apparently solid mass, which extended above the brim of the pelvis. No fluctuation could be perceived at any point. The urethra

and base of the bladder seemed to be completely fixed in the mass, as did also the rectum. As the patient was manifestly running down, abdominal section was performed on February 4th by an incision of two inches between the umbilicus and pubes, when the omentum was found completely adherent to the abdominal wall and to the roof of the pelvis. On breaking down the adhesions of the omentum to the pubes, a large quantity of foetid pus escaped. Sponges were packed into the upper part of the incision to prevent the general peritoneal cavity being soiled. The abscess cavity extended deeply behind the uterus, between it and the rectum, the walls being formed by the small intestine above and the large intestine below. A Keith's drainage tube was introduced to the bottom of the cavity which was well irrigated with a hot solution of salufer, ten grains to the pint, ten or twelve pints being used; the irrigation being continued until the fluid returned clear, the upper part of the wound was closed, leaving the drainage at the lower end. Although the temperature had been high (between 100° and 103°) for a fortnight, it became quite normal the same evening, and remained so for a week, after which it was a little irregular, the irregularity apparently depending on the freedom or otherwise of the drainage. The wound was dressed every day at first, and then less frequently as the amount of pus at each dressing became less. At the time of operation there were some nodules on the peritoneum suspicious of tubercle. The patient was up at the month end and returned to her home at her own request on March 31st, there being still a rubber drainage tube in the wound.

I have reason to think that although relieved of the pelvic trouble, she never fully regained her strength and ultimately died of phthisis.

CASE V.—Pelvic Abscess—Tubercular Peritonitis—Exploratory Laparotomy—Extensive Adhesions over Abscess Sac—Subsequent Aspiration *per vaginam*—Relief.

A. S., æt. thirty-one, married, was admitted into the Infirmary in April 1884, suffering from pelvic pain and

frequency of micturition. She had been a bedridden invalid for some months, during which time she had lost flesh considerably and had suffered from night sweats and an evening temperature.

Abdominal examination revealed fixation of the uterus with an indurated swelling to the left, apparently adherent to all parts in its neighbourhood.

On May 24th, the abdomen was opened by an incision in the linea alba below the umbilicus, when the peritoneum was found to be studded with miliary tubercle; and the intestines, also tuberculous, were firmly fixed over the roof of the pelvis, hence the abdomen was closed. Union occurred by first intention, and ten days afterwards aspiration of the abscess was performed through the roof of the vagina. Although no fluctuation could be felt, three ounces of foetid pus were withdrawn, and a short time afterwards the patient returned home much improved in health, and after a few weeks was able to resume her household duties.

CASE VI.—Pelvic Abscess—Laparotomy—Evacuation and Drainage—Cure.

Mrs. M., æt. thirty, called to see me on March 9th, 1889, on account of pelvic distress, debility and loss of strength. She said that she had had three children, the last fifteen months ago, since which time she had never been strong, but this she attributed to suckling.

Menstruation commenced three months after her last confinement, and she had been quite regular up to twelve weeks before seeing me, when she caught cold during a "period," and had what her doctor called inflammation of the bladder, which made her feverish and seriously ill for five weeks. The "period" did not close abruptly, but was followed by a shreddy, sanguineous, and then by a leucorrhœal discharge.

During the twelve weeks before seeing me, she had had severe pain in the left ovarian region, pain down the left thigh, frequent and painful micturition, evening chills and fever, tendency to diarrhœa after food, great debility and marked loss of flesh.

On examination I found the os uteri fissured on the left, the cervix brawny and hard, the uterus firmly fixed to a hard mass which extended to the left side of the pelvis, and to one and a-half inches above the brim, the latter extension could only be felt bimanually, and could not be seen by inspecting the abdomen. No fluctuation could be felt. The bladder and rectum seemed both involved in the mass. I advised her to go into the infirmary for operation.

On admission, a week later, a doubtful sense of fluctuation could be felt deeply in the left ovarian region. Her general condition was much worse, and her temperature fluctuated between 100° and 108° .

March 20th.—Laparotomy was performed by an incision of one and a-half inches in the median line below the umbilicus, the tumour could be felt on the left of the uterus with the omentum firmly adherent over it. Sponges were packed around the opening, and on exploring with an aspirator needle six ounces of offensive pus were withdrawn. In order to get at the tumour a hole was made through the adherent omentum, the parietal peritoneum was then tucked down and sutured with chromicised catgut to the visceral peritoneum covering the tumour, which was then opened and drained by a glass tube. Three deep silk sutures closed the remainder of the incision.

From the time of operation the temperature became and remained normal, the pain ceased, the appetite returned, and with it the cachexia disappeared and flesh was gained.

The stitches were removed on the 7th day and the tube on the 9th.

From the time of operation to the healing of the wound not a drop of pus was seen. On examination *per vaginam* at the end of a fortnight, the uterus was much less fixed and the oedema of the cervix had disappeared.

She was allowed to get up at the end of three weeks and was discharged cured within a month of the operation.

Remarks.—The cases I have related were all serious, as these cases usually are, and without active treatment I believe

they would all have died, either immediately or remotely, as a result of the pelvic disease, whereas under the operation treatment here recommended relief was given in all, and complete and lasting cure was effected for several of the patients. The first, second, and sixth cases are the most remarkable as they are the most satisfactory, in that there was an absence of tubercle or other diathetic condition which could retard convalescence: they show also that although the abscess be never so foul, and though it have been in communication with the bowel or bladder for long periods, it is with due precaution quite safe to evacuate it through the peritoneum.

The circumstance that particularly astonished me in Cases I. and VI. was that after the evacuation of such foul abscesses and the cleansing of the cavity by syringing with an antiseptic, there should never be even a suspicion of odour or of pus in the subsequent dressings. Case I. also shows that there need be little fear of a fæcal fistula in opening such an abscess, for the opening into the bowel is probably usually a small sinuous track, otherwise the cavity would be likely to contract and become cured spontaneously, and not to persist for years.

The complete disappearance of the stricture of the rectum in Case I. is worthy of comment, for although I expected some amelioration, its complete cure certainly exceeded my expectations.

It is a difficult matter to lay down any general rules for the treatment of these cases, as each one must be treated on its merits, *i.e.*, according to its cause, its site, and its condition. The natural progress of a pelvic abscess is to find an outlet for the discharge of its contents, but as to the course it will select, our anatomical knowledge will seldom enable us to predict it with certainty until the process is well nigh complete.

Hence, when we have once made the diagnosis of pus within the pelvis our course should be, not to wait for Nature's uncertain method, but to evacuate it, and unless fluctuation

can be felt *per vaginam* when the abscess may perhaps be attacked in that direction, the plan of opening the abdomen, searching for, evacuating and draining the cavity, will, if done *secundum artem*, probably be found to yield the best results.

Since writing the above I have operated on other four cases successfully. In one case the abscess was situated in the ovary, and intervened between a small fibroid of the uterus and the rectum; in another the origin of the pus could not be made out, but about fifteen ounces was evacuated; in a third the pelvic abscess was lined by intestines, and the pus probably started from a perforated vermiform appendix; and in a fourth a suppurating dermoid cyst had burst into the bladder, through which it was discharging, the patient at the time being almost at death's door from septic absorption. In the last case the opening into the bladder closed within the week, at the end of which time the temperature had become normal.

In all these cases the abdomen was opened and the abscess drained above the pubes.

The PRESIDENT recalled attention to the fact that a valuable paper had been read by Dr. R. T. Smith at their last meeting, pointing out the different varieties of pelvic abscess, while the paper they had just listened to was based on clinical facts, including operative treatment. He insisted upon the importance of the subject, and as to its value in the method of treatment as applied to those cases they had been in the habit of too indiscriminately calling cellular abscesses, whether in connexion with the uterus or adjacent parts.

Mr. REEVES said he himself had only had one case of the kind described by the author, but he mentioned that several such had been recorded by Terrilion. The only difference between the procedure of this operator and that of the author was that the former advocated scraping of the abscess cavity. Most of the cases recorded by Terrilion were successful, one only being merely relieved and the others cured. He said that although he would take every precaution to avoid the escape of pus or blood into the peritoneal cavity, he would not be afraid of

it nor even of fæces. He alluded to a case under Mr. Harrison Cripps, and he had sent a somewhat similar case to the *British Medical Journal*. As to cholecystotomy his experience had taught him that a small quantity of healthy bile in contact with the peritoneum was not to be feared, and arguing physiologically, he did not see why it should be dangerous given its well-marked antiseptic properties. He dissented from the author's nomenclature, for the author had spoken generically of pelvic abscess, but two or three of his cases were peritoneal abscesses. He had had several such cases in which he proceeded by raising the peritoneum before opening the abscess. He asked whether the author did not think in the first place that it would have been possible by cutting or dilating the rectal stricture in one of his cases to have found the sinus, and by dilating it to drain the abscess cavity. He suggested that the author's conclusions must be taken with reserve, for the treatment which he advocated might succeed well enough in the hands of experienced surgeons like the author; but there was a risk that younger men might be induced to attempt laparotomy in cases in which it could very well be dispensed with. He objected to the term laparotomy and much preferred a word of his own coinage, viz., ventrosection. He would have liked to have seen in Dr. Smith's excellent paper a working classification of pelvic abscesses, the most common form of which in surgical work was inflammation and formation of pus round the large intestines or appendix, or in connection with the kidney. In gynaecological surgery, however, mischief originating in the womb and appendages was the chief source of the disease and the results must be treated according to the local conditions.

Dr. BARNES said he could not discuss the paper with the fulness that it required, and he joined cordially in the praises expressed as to its merits. The cases were well carried through to the right surgical conclusion. In respect of the causes of the collection of pus, he had seen a good many of these cases, and he had hardly ever been able to discover the source of the mischief. If there existed a way of ascertaining

definitely what was the cause of the abscess, it surely ought to be by opening the abdomen, and this might be urged as one argument in favour of abdominal section. He could recall to mind three or four cases in which he regretted not having opened the abdomen; but on the other hand he had had successes that might be termed brilliant by perforation through the roof of the vagina. He thought this method could not be altogether supplanted by abdominal section, although in a certain class of cases this was the more thorough and radical method. He observed that the author had not said anything as to the use of the exploratory trocar, but he would point out that the procedure was practically unattended by risk, and the mere introduction of the trocar and the removal of the fluid had sometimes proved sufficient to determine a cure. In some cases he had extended the exploratory incision, afterwards inserting a drainage tube, and the cases had ended in recovery as quickly as would have been the case had abdominal section been performed. Mr. Reeves had mentioned a case in which there was an external sinus on which he proposed to operate. The objection had been made that by opening the sinus into the rectum they might make use of the passage provided by Nature. Mr. Reeves did not trust to the sinus. It was well known that a sinus was not enough. It was at best an abortive effort of Nature. Make a good artificial deviation and then the sinus might heal. He would prefer abdominal section as a rule, but the exploratory incision was a means too valuable to be overlooked. He did not like to enter into the discussion as to what was a pelvic abscess and what was an intra-peritoneal abscess, but they could not get on until they arrived at a definition. The old maxim, "*Felix qui potuit rerum cognoscere causas*," applied with peculiar force in this matter. One other condition which he more than suspected would explain some cases, begins with hæmatocele or some form of hæmorrhage into the peritoneum, which subsequently became a focus of suppuration. The blood became altered and decomposed, and when they opened the abdomen they found no trace of the blood and

only pus. With reference to the explanation of the mass lying chiefly on one side—the left side—this he had long ago shown by anatomical researches that the peritoneal pouch descended deeper down on the left than on the right side. It slanted obliquely off from right to left behind the vaginal portion, and so all fluids collected in the pelvis gravitated to the left side, and consequently any resulting inflammation was more marked on that side. That was an element of considerable importance clinically.

Dr. BANTOCK said that the success of the cases reported by the author reflected the greatest credit upon him as a skilful surgeon. His attention was arrested by the use of the term cellulitis. In his earlier days, he remembered, cellulitis was in everybody's mouth, and whenever a fulness was felt in the pelvis on either side of the uterus with more or less friction of that organ, the case was put down as one of pelvic cellulitis. Even at the present day a distinguished American surgeon and author held this view. For himself, the older he became and the more his experience was extended the less he believed in pelvic cellulitis as a pathological condition. Many years ago he met with a case of abscess in the pelvis, which he even now believed to be a true abscess of the left broad ligament, for it presented those conditions which he regarded as characteristic. There was a distinct bulging downwards into the vagina on the left side of the uterus. He removed several ounces of horribly foetid pus by means of a trocar and cannula, washed out the cavity by means of a catheter through the cannula and continued it till the solution of iodine returned clear, and did not remove the catheter until three to four hours had elapsed. The cavity healed up forthwith. As he had said, he still believed this was a true abscess of the broad ligament, but he had not seen one since. Whenever he had since met with what had usually been regarded as pelvic abscess or cellulitis, he had found the disease to be some form of inflammatory mischief affecting the tube or tube and ovary. The matting together of the tube and other pelvic strictures and especially the adhesion of the tube to the broad ligament

and its distension with inflammatory products resulted in the formation of a mass, which might readily be mistaken for a pelvic abscess. But the recent advances of abdominal surgery had dissipated many errors and cleared up what was formerly mere conjecture. He agreed with Mr. Reeves in finding fault with Mr. Mayo Robson's nomenclature, for in these days the term pelvic abscess conveyed to his mind no definite idea. He should have liked Mr. Robson to tell us what was the origin of these collections of pus. In only one had he given us any explanation and that was only in the form of a suggestion. Still, the cases were very interesting, and the results were the strongest argument in support of the treatment pursued.

Dr. BEDFORD FENWICK said it was difficult to discuss such a paper, for there were so many difficulties in the diagnosis, prognosis and treatment. He was convinced with regard to pelvic abscess that it must have a connection with a distinct constitutional cause. He had frequently seen women whom he kept under observation in whom the formation of pelvic abscess had coincided with some induced ill-health. He mentioned one such case at the hospital in a woman who had come to him for some chest complaint, and who complained of considerable pain on the left side and on examination he found there was considerable thickening of the right broad ligament. She had typhoid fever later on and during the period of debility which followed that illness she developed what afterwards turned out to be a very distinct pelvic abscess, which he opened and drained with success. Three years ago they had another case in the hospital for treatment, who had an abortion. She had been in good health before, but in consequence of the profuse hæmorrhage she became very enfeebled, she got a slight chill, and a pelvic abscess was the result. He could recollect many such cases in which patients had gone on for years with some form of uterine mischief, and then when ill health supervened an abscess formed. He mentioned that some half dozen cases which had been diagnosed as pelvic abscess had all been connected with either the uterus, the tubes or the ovaries. He

had a marked example of this on the preceding Monday, when he operated upon a case of Dr. R. T. Smith's who was incapacitated at the time from operating himself. There was a clear history of pelvic abscess, but upon opening the abscess in the abdomen a tumour bulged out, which at first looked very much like a uterine mass. On puncturing it, however, it proved to be an abscess connected with the left broad ligament. He frequently had occasion to point out how that their old idea of pelvic cellulitis was a fallacy, and that the cellular tissue of the pelvis was not more apt to take on inflammatory action and run on to abscess than connective tissue elsewhere in the body.

Dr. HEYWOOD SMITH asked for some practical details as to the method of introducing the deep sutures in the case related by the author, in which the abscess was so very low down in the pelvis that he had the greatest difficulty in getting the parietal peritoneum down to that covering the abscess cavity. He said that in some of these cases there was a curious association of softness and friability, which made it very difficult to obtain a satisfactory grip. He quite agreed that many of the cases described as pelvic abscess were in reality connected with one or other of the pelvic organs. He mentioned a typical case which had come under his notice that very morning. The patient was a young German lady, who had been married a fortnight. Five or six weeks ago she had been seized with sudden pain in the left iliac fossa, not unlike the onset of hæmatocele. There was a history of chill during a menstrual flow, with distinct rigor. She was seen by a medical man, but neither he nor his successor had thought it necessary to examine her, and so the pain, &c., had been allowed to go on for five or six weeks. He asked in what way a chill was supposed to act in connection with an arrest of menstruation, whether it produced a reactional disturbance of the circulation leading to effusion or how. He asked whether any *post mortem* examination had been made in a case in which death had occurred from some other cause soon after such an arrest of menstruation.

Dr. FENTON said he had been struck by the immensity of the subject with which they had to deal and the number of the questions that suggested themselves, so much so that the Society appeared hardly to feel equal to discussing the numerous facts brought before them by Mr. Mayo Robson in such a broad spirit. It had occurred to him that these cases of pelvic abscess might be divided for purposes of treatment into three classes: (1) Those which were down upon the pelvic floor, that is, flush with the roof of the vagina, so that they could be got at from the vagina with a trocar without passing into the peritoneal cavity and then on into the mass beyond. To treat these cases by a vaginal opening would be perfectly rational. (2) Collections of pus which did not come down to the pelvic floor, but which were in the abdominal cavity within the limits of the pelvis, either the true or the false. To treat these by a vaginal opening would be to court disaster; they were most difficult to get at to drain, but that this was not impossible was shown by some of the cases related by Mr. Robson. He could understand with Dr. Heywood Smith that there must be some difficulty in stitching this thin, friable peritoneal covering of the abscess to the parietal peritoneum. (3) This class would only include suppurations of the broad ligament which usually presented at the pelvic brim, the real pelvic cellulitis. He confessed that he was old-fashioned enough to believe that there were really cases of pelvic cellulitis, *i.e.*, cases of inflammation of the cellular tissue in the broad ligament running on to suppuration, so frequent after confinements and miscarriages. These would be cases to be got at by sub-peritoneal laparotomy and he had dealt with several cases of this kind in the same way as that described by Mr. Mayo Robson. With reference to the suggestion to dilate a sinus for the purpose of draining the abscess cavity, he said that the only case in which he had done this he had had occasion to regret it. It was a case of pyo-salpinx for which he had made an abdominal incision hoping to remove it. He found one tube largely distended with pus and adherent to the rectum so that


it could not be removed. He waited, therefore, until the wound had healed up and then dilated the rectum, found the fistulous opening and introduced a No. 12 catheter, emptying the cavity and syringing it out thoroughly. The patient got much better, but still there remained a discharge of pus with the stools which caused a great amount of discomfort.

Dr. MANSELL MOULLIN said that of course the difficulty of reaching these abscesses for drainage was the great practical difficulty in these cases, and they would be glad to have a few more details as to his method of proceeding. He said that there was no need to be unduly frightened, if a small quantity of this foetid pus escaped into the peritoneum it would only be necessary to wash it out carefully afterwards. He presumed that the author took care to evacuate the entire contents of the sac before stitching it to the parietal peritoneum. This latter proceeding, however, might not be possible in some cases, and the question arose whether it was absolutely necessary to do so in every case. A drainage tube passed into the abscess cavity would, he believed, be found sufficient when it was impracticable to bring the visceral and parietal peritoneum into apposition.

Mr. REEVES said that the collapsed abscess sac could be pulled up and tied around a glass drainage tube. This was a simple, safe and efficient proceeding, which he adopted in one case.

Mr. MAYO ROBSON in reply, thanked the Fellows for the kind manner in which they had received his paper. With reference to the scraping of the abscess walls, he observed that he had done it in one case, but as a rule the walls of the cavity were constituted of intestines matted together which it would hardly be safe to scrape. He said that he too was not afraid of pus or fæces in the peritoneal cavity if not there through his fault, as he practised freely washing out in such cases, but he did his utmost to prevent the soiling of the peritoneum. In the case in which he had spoken of the vermiform appendix as the possible source of the suppuration, he

did not affirm that it was so, but that it was one of the probable causes. It was all very well to make a positive diagnosis, but while they would be quite safe in saying that there was pus in the pelvis, it would usually be mere guess-work if they attempted to say that the cause was this or that after the pus had been there six months or longer. He had purposely abstained from stating a diagnosis in this and in the other cases; he had, however, formed his own opinion. In two, hæmatocele was the cause, in another probably pyosalpinx, and in another he knew that it was a dermoid cyst which had suppurated and burst into the bladder. He had preferred to give the clinical history and then to leave the Fellows of the Society to draw their own conclusions. With regard to the suggestion to dilate the stricture of the rectum he thought that this question had been fully answered by Dr. Fenton, but he might add, that Case I. had been under the care of several well known physicians and surgeons, and one of the methods of treatment adopted had been to dilate the rectum, but without success. With regard to the causation of cellulitis, he observed that they were in the same position as they were formerly in regard to typhlitis. For a long time they had been in the habit of speaking of trouble in the region of the cæcum as peri or para-typhlitis, whereas in reality it was due to localised peritonitis, ending at times in abscess. He was of opinion that many of the so-called cases of cellulitis were localised peritonitis culminating in abscess. At the same time he did not doubt that a certain number of them were indisputably cases of inflammation of the cellular tissue in the broad ligament. He was disposed to think that the explanation of the preponderance of effusions on the left side might perhaps be explainable by the reason alleged by Dr. Barnes. It was a well-known clinical fact that any effusion in the left broad ligament tends to spread downwards and tends to encircle the rectum. He explained that in order to stitch the parietal peritoneum to that covering the sac, he always, when he could, aspirated the abscess before opening the cavity, so as to avoid the soiling of the peri-



toneum. He first of all passed a fully curved Hagedorn's needle through the parietal peritoneum, and then pressed it down on the abscess sac and passed the needle through the visceral peritoneum, always taking a good grip. As to the question of chill, he observed that some persons did not believe in it at all, and it was quite possible that the chill was a consequence, and not a cause, of the disease. It was, however, conceivable that a chill should cause suppression of the menses, though why it should lead to effusion into the pelvis he could not say.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, MARCH 26, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT:—Fellows, 19; visitors, 4. The following were proposed for election:—Dr. John Stoneby Hill, London; Dr. H. Holmes, Portland, Oregon.

Dr. EDIS showed a specimen of a sub-peritoneal fibroid, which, though not large, caused so much pain on account of the pressure in the pelvis that it had driven the sufferer into intemperate habits and to the habitual use of morphia. On operating he had to force it up out of the pelvis in which it was impacted. The stump was very difficult to get up, but after some trouble this was satisfactorily accomplished. The subsequent progress of the case was very satisfactory, and the pins were removed on the fifth day. There were some symptoms of bladder irritation, owing to the pressure of the stump.

Dr. HEYWOOD SMITH asked whether Dr. Edis considered that no danger attached to letting go the stump so early, viz., that it might be retracted into the abdomen.

Dr. BANTOCK said that he did not consider that the annoyance of a little sloughing of the skin was sufficient to warrant the early removal of the pins, even in cases in which the pedicle was so short as to cause sloughing of the skin. He would be afraid that the traction upon the pedicle would, in spite of the *serre-nœud*, have a tendency to put the recent adhesions to too great a strain. He much preferred the method which he had several times illustrated before the Society, by means of which all the risks and inconveniences incidental to such a practice would be obviated. This plan consisted in separating the peritoneal envelope from the

uterus, then stitching the edges together, putting the *serre-nœud* on the raw surface. All the trouble which arose from a short pedicle would thus be avoided.

Dr. FENTON thought that Dr. Edis had done well to bring the case forward, because it was a kind of fibroid that caused a good deal of trouble to the patient as well as to the man who proposed to operate. It was often said at a consultation that there was no necessity to undertake the removal of so small a fibroid, but these fibroids were precisely the sort of tumour that caused the greatest amount of suffering to their unfortunate possessors, on account of their accurately fitting the true pelvis and exerting so much pressure on many important structures. In a case which he hoped to bring before the Society he had removed the pins on the fifth day and no harm had resulted.

The PRESIDENT said he thought it was just one of those cases in which nothing could afford relief short of an operation. If allowed to go on it was sure to become strangulated, and the President asked whether it would not have been wise to have removed the ovaries at the same time, seeing that it was a case of fibro-sarcoma, and at any rate to push the tumour upwards and so out of the way to provide more room in the pelvis. He mentioned a similar case in which a lady doctor had "taken the shine" out of the male doctors. The latter had all decided that nothing could be done, although the sufferings of the patient, which often entirely prevented micturition, were very great, and the lady doctor took upon herself to push the tumour up out of the pelvis, to the patient's great relief. Fortunately there were no adhesions in that case.

Dr. CARFRAE mentioned a case in which this procedure had been adopted without affording any relief beyond enabling the patient to empty the bladder. The pain and discomfort remained the same.

Dr. EDIS said he only suggested the removal of the pins on the fifth day, and not on the second or third day as mentioned by Dr. Heywood Smith. He had taken care to

sew up the peritoneum securely; moreover, he had tried the plan before without any mishap. Even if the patient vomited he did not see that there could be any great risk. He had tried various tricks, with the object of distributing the pressure of the pins, but without success. Without altogether advocating the plan of the early removal of the pins he thought the practice was worthy of a trial. He had observed that it was the practice with certain American surgeons to remove the stitches on the second day, and the patients did not seem to have been any the worse for it. He objected to their being blindly guided by precedent in such matters. He had often remarked in taking out silk sutures a line of suppuration in their wake, and if this could be safely avoided he thought it was desirable to do so. For his own part he proposed in future to remove the stitches early and afford the necessary support by means of strips of plaster. When he was obstetric physician at the Middlesex Hospital he was not allowed to operate, and he had had recourse to every imaginable trick to relieve these cases without operation. He had sometimes succeeded in pushing up the tumour, but now that he had a free hand he preferred the more radical measure which disposed once and for all of the growth. The case he had brought forward was not one in which the pushing up of the tumour would have done any good, for one of the ovaries was also diseased.

Dr. HEYWOOD SMITH showed a tumour which he had enucleated on the previous day from a lady aged fifty-eight who had been married thirty-seven years, and had been pregnant fourteen times. Menstruation had ceased when she was fifty, having probably been kept up by the presence of the fibroid. She had consulted a medical man last August, who thought that she had a polypus. When he saw her a few days since it appeared to him to be a fibroid involving the anterior lip of the cervix. Previous, however, to the operation he found that it was much more formidable than he had supposed, for it turned out to be attached to the fundus and right down to the cervical edge. He drew it down with the vulsellum and cut part of it away with scissors. He then

managed to get hold of the whole mass and passed the wire of the *écraseur* round the remainder of the tumour. He called attention to the forceps which he used to complete the removal of the tumour after it had been separated. He used matico and packed the cavity of the uterus with iodised wool having first irrigated with hot water.

Dr. Heywood Smith also showed a pelvis constructed in a plastic material which allowed of its being bent into various forms so as to demonstrate the varieties of pelvic deformity. Also a Reverdin's needle for applying sutures which materially shortened the time required for that otherwise tedious part of the operation. Thanks to this ingenious device the whole operation, including the removal of the ovaries, only took seventeen minutes.

Dr. PURCELL said that on two occasions he had used midwifery forceps for the purpose of delivering the tumour *per vaginam*, after having separated it by means of the *écraseur*.

Dr. BANTOCK asked whether the tumour was not semi-pedunculated or sessile.

Dr. SMITH said it seemed to start at the fundus, but it was adherent right down to the cervix. It was covered by mucous membrane.

Dr. BANTOCK observed that this was a very different thing from the enucleation of an intra-mural fibroid.

Dr. FENTON observed that it was an interesting feature that the patient was 58 years of age, because one was often met with the objection, on proposing to operate on a woman of 40, that the symptoms would cease about the age of 45. Every day one's experience widened, and one saw that these fibroids did not cease to cause pain and hæmorrhage at the climacteric. Dr. Smith added that the patient's last child was born when she was 42, 16½ years ago.

Mr. BOWREMAN JESSETT read the notes of a case of vaginal hysterectomy operated upon on the previous Saturday. The interest of the case lay in that two years before a polypus had been removed from the uterus. After that there had been a good deal of hæmorrhage, and in February, 1889,

she had been admitted to the Samaritan Hospital, where she received considerable relief. In September last year she again had a mass of disease in the uterus, and was bleeding profusely, as a consequence of which she was profoundly anæmic. He removed the mass by means of a Volckman spoon, and cauterised the stump with chloride of zinc. The growth proved to be a fibro-sarcoma. About a month ago she was again admitted under his care, and he found a mass in the uterus which was subsequently propelled into the vagina. He hoped to enucleate it, but it was so intimately adherent to the uterus that he proceeded to remove the entire organ. It was interesting to notice that the growth appeared to spring from the left cornu of the uterus, which was completely inverted and had dragged down the Fallopian tubes with it. In performing the operation he had adopted the plan of laying open the peritoneal sac between the uterus and the bladder, and then with the fingers tearing the peritoneum freely open, doing the same thing with Douglas's pouch. He then put two long pairs of forceps on the broad ligaments close to the uterus, dividing the tissue between. Considering the size of the growth, it was astonishing how little difficulty there was in removing it. He ligatured the broad ligaments afterwards, and ligatured the ovarian arteries, and the patient was progressing favourably.

The PRESIDENT asked whether it would not have been wise to have removed the ovaries at the same time, seeing that it was a case of fibro-sarcoma.

Dr. PURCELL observed that it was fortunate there were no adhesions, and that the uterus came down so easily. The disease did not appear to have involved the outside walls of the uterus, therefore Mr. Jessett was justified in leaving as much of the broad ligament as he could.

Mr. JESSETT, in reply, said the growth started from the walls of the uterus, and it was this that had inverted the uterus; while endeavouring to enucleate the growth he tore through the walls of the uterus into the peritoneal cavity before he expected it. The reason for not removing the whole

of the uterus on the first occasion, three months before, was that it was not until he had removed the growth on that occasion that it was found to be a sarcoma.

Dr. BANTOCK showed a specimen of soft sarcoma removed from a single woman of 36; a week before the growth of the tumour had been very rapid, and lately had been attended by so much hæmorrhage that it incapacitated her from her work. She was seen by Dr. Ingleby Mackenzie, and was sent on by him to the Samaritan Hospital. This case illustrated a point which had already been under discussion. The line of the peritoneum was very high on the growth, and it was one of those cases in which the pedicle was very short, and if he had treated it in the ordinary way, by putting a *serre-nœud* round including the peritoneum, he would have a very short pedicle with a tremendous drag upon it. Indeed, he would possibly hardly have been able to get the pins through so as to bring them out on the skin. He therefore adopted the plan which he had lately had several times had occasion to bring before their notice. He first of all put on an elastic ligature, then divided the peritoneum all round, stripping it down to the base of the tumour. Then he secured the ovarian vessels on either side, and applied the *serre-nœud* to the raw surface, the tumour being enucleated away down to the level of the internal os. In this way the whole of the pedicle was extra-peritoneal. These surfaces were stitched together, the pins being put through the raw surface not touching the peritoneum. In that way there was very little drag upon it. Probably in consequence of this there had been no constitutional disturbance at all. The uterine cavity was rather large, it felt rather granular, and that, no doubt, accounted for the excessive hæmorrhage. He observed that Dr. Edis seemed inclined to maintain his position that he had done quite right in removing the pins so early; but he recalled a case in the old days of ovariectomy when the clamp was the usual way of treating the pedicle. He had seen the pedicle become completely retracted five or six days after when the clamp was removed, and the patients consequently died. In a case of his own he

had applied a *serre-nœud* and a couple of pins. Quite a week after the patient was sick, and strained considerably. In consequence of this the peritoneal adhesions at the upper part of the stump gave way, and the intestines came through the wound, and he had to sew it up again. Fortunately the patient recovered. Then as to removing the stitches early in a case of ovariectomy in a fat subject, he had removed the whole of the stitches on the seventh day, taking the opportunity of showing some strangers who were visiting the hospital a wound healed by first intention without any antiseptic dressings. The wound was perfectly united, but on the following morning the patient lifted herself out of bed, when the abdomen suddenly opened. There was sudden pain in the abdomen. When he sat at the usual time, the patient complained of headache and discomfort, nothing more. The wound, however, had given way, and two hours later he was sent for in a great hurry, and on his arrival he found two feet at least of the intestines outside. The wound had given way for nearly a couple of inches. He cleaned the intestines and put them back, and the patient recovered without a bad symptom. Since then he had been very careful about removing the sutures. Though in many cases they might escape the accident, yet in exceptional cases they would get a bad result which might have been avoided. He himself sometimes removed the alternate stitches, but he never removed all of them until at least a week had elapsed.


The next specimen was of another sort, and it illustrated the two methods of the treatment. They were two specimens of epithelioma of the cervix uteri. The first one was from a widow lady, aged 47, the mother of seven children, the youngest being 17 years of age. Menstruation ceased at 49, and the symptoms first showed themselves in October last. The disease must have progressed very rapidly, for in January of this year she was losing very freely, and became excessively anæmic. She was examined in Rome by Dr. Thompson, who removed the epitheliomatous mass and cauterised the cervix. Fourteen days later he again cauterised the cervix.

From January 14 to February 14 she lost no more blood, and her general health improved. Then the bleeding returned, and the cervix was once more cauterised. Not satisfied, however, with the condition of things, Dr. Thompson had sent her to England to place herself under his [Dr. Bantock's] charge. The patient arrived about the end of February, and he had operated on the 7th March. The cervix was much enlarged, and there was no other means of removing the disease short of total extirpation of the uterus. In doing this he cut through the peritoneum before and behind the uterus as soon as possible, and divided it laterally as far as he could. He then divided between the forceps and the uterus, and freed the uterus on the left side with very little difficulty. He then brought the uterus down on the other side, and snipped away along the peritoneal edge until he saw the ovarian vessels coming into view. Then he put a ligature on the ovarian vessels, including as little tissue as possible. Lastly he applied a ligature and removed the uterus. There was a little hæmorrhage on the right side on removing the forceps. It was remarkable how little constitutional disturbance there was in some of these operations. The pulse was never above 80°, nor the temperature above 98·6°. She was now quite convalescent.

The other specimen was removed from a widow woman, aged 36, with a history of five months' duration. She had been sent to him the previous week, and he had at once recognised the gravity of the case, and had operated on March 22nd. In deciding upon the operation in this case he had been guided by the fact that he could get round the whole of the disease, finding healthy tissue apparently all along the circumference. Before applying the wire for the electro-cautery, he had used an apparatus which he showed by first of all slipping the india-rubber cord round the cervix the best way he could. It was then passed through the instrument, and, by simply pulling it until it was taut, that formed a loop through which the platinum wire could easily be made to travel. Then the tube was detached from the instrument and withdrawn. There

was not the slightest appearance of blood on the whole surface. Before the operation the temperature was 100.6° Fahr. Since then it had fallen, and that afternoon it was at least one degree below what it was prior to the operation. He hoped the result would be satisfactory; but whether he had succeeded in removing the whole of the disease time alone would show. Judging, however, from two cases, one and a-half and two years ago respectively, there was reason to hope that this was the case, for in those there had been no recurrence of the disease.

The next was perhaps the most interesting specimen of them all. It was removed from a patient aged 55, and comprised a foetus, the right appendage and the placenta. The patient was the mother of five children. On February 25th, he had been asked to see her by Dr. Morton. She had then been ill a fortnight; sixteen days before she had been seized with sudden pain in the abdomen, later followed by collapse. She was kept quiet and seemed to be doing well, but at the end of the fortnight she had another attack of pain and collapse, followed by a third two days later, and was so bad that she was not expected to live through the night. It was then that he had been asked to see her and he at once confirmed Dr. Morton's diagnosis as to the nature of the case. It was at first a question as to whether the patient could be moved to the hospital, but eventually this was carried out and he operated at once. As soon as the peritoneal cavity was opened a large quantity of blood and clots escaped; he passed his hand down towards the right appendages and at once got hold of the ruptured cyst, brought it out and ligatured it. The placenta was found a little lower down and they were fortunate enough to catch the foetus as it was washed out with the discharge. The amount of blood in the peritoneal cavity might be judged from the fact that he had to use six large water cans of hot water before it was thoroughly cleared away. He ought evidently to have continued the irrigation longer, for two hours later when the nurse emptied the drainage tube, it was so bloody that she



thought there must be secondary hæmorrhage. A great deal of this no doubt came from coagula in Douglas' pouch. The patient had done very well and he hoped she would be able to leave the hospital in the course of the following week. He did not remove the appendage from the other side because it seemed to be healthy, and he wanted to get through with the operation as soon as possible. With regard to the hot water irrigation, he mentioned as a remarkable fact that though when the patient was put upon the table she was blanched and pale, by the time the operation was over she was in a profuse perspiration and had quite a colour in her cheeks. There was just a commencement of peritonitis before the operation, and the peritoneum was stained quite dark by the action of the blood.

Dr. HEYWOOD SMITH, with regard to the first case, asked for a more exact description of the manner of dealing with the peritoneum. Dr. Bantock had spoken of stitching the flaps together, and this was not very clear to him. What he wanted to know was the exact position of the peritoneal edges after the wound was closed.

Dr. BANTOCK demonstrated his procedure. First he applied a ligature outside the tumour, covered as it was by peritoneum. Then he opened the peritoneal investment and applied the *serre-nœud* at the base of the tumour, this time *inside* the peritoneum. Having removed the tumour, there only remained to stitch together the layer of peritoneum, covering what was the base of the tumour, *i.e.*, the broad ligament, with that lining the parietes.

Dr. MORTON said this served to illustrate the fact that, although the symptoms of a case of this kind might be well marked, the history was often obscure and misleading. The patient did not consider herself pregnant at all. The fact was elicited that it was six weeks between her last periods, and she had had a discharge for three weeks. It was also rather inconsistent with what they had been taught to believe, that most of these cases occurred in persons who had been sterile, owing, as Mr. Tait supposed, to loss of the ciliated epithelium

of the tubes. This woman had gone on having a family at regular intervals for years, the last child having been born the preceding year. There were evidently three successive hæmorrhages, one on Feb. 7th at nine weeks, very severe and threatening life; a second on Feb. 20th; and a final one, the most severe of all, on the 22nd. There would probably have been no more hæmorrhage after this, but recovery was hardly to be looked for.

Mr. BOWREMAN JESSETT said he fully confirmed what had been said with regard to the removal of the pins. From his experience in inguinal colotomy, in drawing out a loop of intestine, if the ligature which passed through the mesocolon were removed too early, it was not uncommon for the intestine to be retracted into the abdominal cavity, and for fæces to escape into it. This had occurred in one case of his own, and he had seen another recorded in the *Medical Journal*, in which the sutures were removed five days after the operation, and the adhesions had broken down, and the intestines drawn into the abdominal cavity.

The drag upon the stump of a fibroid must be very much greater than that on the large intestine in an iliac colotomy. With reference to the so-called cases of epithelioma, he asked whether they were really epithelioma, or whether the term was used in the broad sense of carcinoma. He considered that genuine epithelioma of the cervix was very rare. Indeed, most cases of carcinoma commenced in the canal of the cervix, extending to the os. The former were usually either cylindroma or scirrhous. It was very rare to get a true squamous epithelioma commencing from the os. Some care ought, therefore, to be shown in the use of the term epithelioma. With regard to extirpation of the uterus in Dr. Bantock's second case, he asked whether the vaginal walls were involved in the growth. Judging from the specimen, this appeared to be the case. If this were so, he asked what Dr. Bantock's experience was as to the advantages of removing the whole of the uterus in such cases. They could see that the disease extended through the uterine

tissue, but whether it affected the vaginal wall or not was not clear from the specimen. For his own part, when the vaginal walls were implicated, he thought vaginal hysterectomy useless. In respect of the other case, he observed that, from the look of the specimen, the disease appeared to extend up the cervical canal, probably beyond the point of removal. The wire seemed to have passed very close to the disease, if not through it; and if it extended, as it usually did, far up the cervical canal, there would still be some diseased tissue left. In that case, he could not help thinking that, by using the scissors and so removing a conical portion of the uterus, he might have got well above the internal os, and a more favourable result anticipated. This, in his opinion, was a very important point.

Dr. HEYWOOD SMITH, with regard to the case of ectopic gestation, asked Dr. Morton how soon there were any symptoms of abnormality in the course of the pregnancy either on one side or the other; also as to the condition of the mammary glands. Mr. Jessett had anticipated his remarks as to the other specimens. Bearing in mind what Mr. Jessett had said about the development of the growth downwards, he thought the glandular part of the uterus was apt to take on a low and somewhat similar growth. He advocated cutting out a conical piece of the cervix or removing the whole of the mucosa of the cavity.

Dr. PURCELL said the Society was to be congratulated upon the progress that hysterectomy had made. Since he read his report of six such cases it had certainly come more into favour. Vaginal hysterectomy was also on the increase, and if suitable cases were submitted to the operation they would obtain a better mortality record, for this at present was very high. In his own cases it was 339. He was fortunate in the start, having no death at all in the first four cases. The whole question lay in whether the disease had infected the mucous membrane of the vagina. If these cases were not operated upon they had proliferating cells in the cellular tissue that led to recurrence before the wound was well

healed. The operation was generally carried out in the way already described by Mr. Jessett. The main feature was to secure the uterine arteries, and in the after treatment the use of the drainage tube with the free syringing out with a solution of iodised water, keeping the parts clean and without suppuration.

Dr. EDIS said he only suggested the removal of the pins on the fifth day and not on the second or third day as mentioned by Dr. Heywood Smith. He had taken care to sew up the peritoneum securely, moreover he had tried the plan before without any mishap. Even if the patient vomitted he did not see that there would be any great risk. He had tried various methods with the object of distributing the pressure of the pins, but without success. Without altogether advocating the practice of the early removal of the pins, he thought the plan was worthy of a trial. He had observed that it was the practice with certain American surgeons to remove the stitches on the second day, and the patients did not seem to have been any the worse for it. He objected to their being blindly guided by precedent in such matters. He had often remarked in taking out silk sutures a line of suppuration in their track, and if this could be safely avoided he thought it was desirable to do so. For his own part he proposed in future to remove the stitches early and afford the necessary support by means of strips of plaster. When he was obstetric physician at the Middlesex Hospital he was not allowed to operate and he had had recourse to every imaginable plan to relieve these cases without operation. He had sometimes succeeded in pushing up the tumour, but now that he had a free hand he preferred the more radical measure which disposed once and for all of the growth. The case he had brought forward was not one in which the pushing up of the tumour would have done any good, as one of the ovaries was also diseased.

Dr. Edis said that no intestine could have come out in the cases in which he removed the stitches. The long strips of plaster were placed not only across the cut but were made to encircle the pelvis. The patient might do what she liked

for she could not possibly force the abdomen open—indeed the abdomen was very much firmer than with the stitches.

Dr. MORTON pointed out that the woman herself was not aware that she was pregnant. She had menstruated nine weeks before the rupture occurred, and during the last three weeks she supposed she was menstruating again. There was no pain until the attack which marked the occurrence of the first attack of hæmorrhage. He did not think they could attach much importance to the mammary signs in a poor woman with many children. In any case nothing was observed.

Dr. BANTOCK said he was glad that Dr. Morton had supplemented the history of the case. It was one of those cases in which no assistance was given by the physical signs usually characteristic of pregnancy. Seeing that the pregnancy was of such short duration, no one would think of expecting the mammary areola to show anything in a woman who had had several children. Nor would there be any signs to lead anyone even to suspect pregnancy. One was therefore driven to rely upon the condition of the patient after the hæmorrhage. So far as he had been able to make out in the first case of epithelioma, the vaginal walls were not infected. The cervix and the os presented a cap-shaped appearance, and that, apart from the physical examination and the appearance of the parts as seen through the speculum, had led him to infer that the vagina was quite free. He thought that was proved in the course of the operation, for there was a clear rim of healthy vaginal mucous membrane around the os. He hoped therefore that the result would be completely successful. With reference to Mr. Jessett's questions as to the microscopical appearances in these cases, he confessed that he knew and cared very little about them. He had more confidence in macroscopical than in the microscopical appearances. He had yet to learn that the microscope would tell them anything in any particular case the nature of the case and contradict clinical observation. When, therefore, Mr. Jessett questioned him as his diagnosis in this case he could only say that he was speaking of what had been for many

years regarded as epithelioma, viz., a growth presenting that peculiar appearance which led to the use of the term cauliflower excrescence, a condition which led to excessive hæmorrhage the moment they touched its surface. In the first instance the disease was usually confined to the cervix alone. The second case illustrated this in a very remarkable way. The moment one pressed the tumour it bled furiously, it presented the cauliflower appearance, also a rim of cervix quite free from disease. It was because of this that he had adopted the particular method of treatment. Had it encroached upon the vaginal wall he would have performed vaginal hysterectomy. When they remembered that in this case of what he called epithelioma the disease originated around the circle of the os and only turned to the cervical canal by degrees, they had a better chance of removing the disease by taking away the cervix than in an ordinary case of carcinoma. With reference to Dr. Edis's remarks as to the removal of the stitches in the case which he (Dr. Bantock) had referred to, in which the wound had given way a week after the operation, he had, as he always did, employed strips of adhesive plaster, in spite of which the wound gave way; and when Dr. Edis said that this was impossible, he was afraid that the facts were against him.

The Society then adjourned.

REVIEWS.

A Text-Book of Obstetrics, including the Pathology and Therapeutics of the Puerperal State, designed for Practitioners and Students of Medicine. By Dr. F. WINCKEL, Professor of Gynæcology, and Director of the Royal Hospital for Women, Member of the Supreme Medical Council, and of the Faculty of Medicine in the University of Munich. Translated from the German with permission of the Author, under the supervision of Dr. CLIFTON EDGAR, A.M., M.D., with 190 illustrations. Edinburgh and London : Young J. Pentland, 1890.

In the present work the aim of the translator has been to faithfully and accurately reproduce in English Professor Winckel's *Text-Book of Obstetrics*. How far success has attended the undertaking must be left to those capable of judging to decide. In some of the passages the translation reads somewhat stiffly, and upon comparison with the original, these sentences are found to be rather literal in the rendering of them into English; the explanation offered is, that where in a given passage the question arose between style on the one hand and precision upon the other, the choice has invariably been in favour of the latter.

Professor Winckel commences his work with an historical introduction, in which we find some new and interesting matter.

There is a short but clear account of the development of the ovum embryo and fœtus. Dr. Winckel's views on the treatment of ectopic gestation are not in line with the latest advance in this country. He says :—"My views and observations agree most closely with those of Freund, who

advises to kill the fœtus in all cases within the first three months by aspiration (better by an injection of morphine). If this does not succeed, he advises expectant treatment, but never operation; when the fœtus is living, laparotomy shortly before term; when the fœtus is dead, to delay as long as possible; when an abscess forms, laparotomy, sewing the fœtal sac to the abdominal wall, then opening of the sac, allowing the placenta and membranes to come away spontaneously, disinfecting the cavity and packing it with cotton." The sections on the different obstetric operations are very clearly explained, and admirably illustrated.

In the chapter on Porro's operation, the author, in discussing the operation of gastro-elytrotomy, says this operation has no future. We quite endorse the opinion of the author, that it is an operation which rests on false premises concerning the peritoneum; it is much more difficult than the ordinary Cæsarian section; the adjoining organs, especially the bladder, are easily injured in it; the entrance of vaginal and uterine secretions during the operation is unavoidable; the resistance of the cervix, in case the os is not yet fully dilated, is very great, and therefore the child's life is much more jeopardized on account of the cramped space than in the classical Cæsarian section. Finally, it seems highly probable, because of the unfavourable direction of the traction, that deep lacerations of the cervix into the lower segment of the uterus are almost unavoidable, and above all, the traumatism (extreme stretching, contusion, forcible introduction of the hand) is much more severe than in the other—in other words, the prognosis would be bad for the healing of the wound.

Taken as a whole the work reflects great credit on Professor Winckel. The translation is a faithful one, and is more than usually free from error. We can conscientiously recommend a perusal of this book to those who wish to be placed *au courant* with the latest advances made on the subject of obstetrics.

A System of Practical and Scientific Physiognomy, or how to Read Faces ; being a Manual of Instruction in the Knowledge of the Human Physiognomy and Organism, embracing the Discoveries of located signs of Character in the Body and Face, as shown by the fine natural divisions of the Countenance. By MARY OLMSTED STANTON, author of "A Practical and Scientific Treatise on Physiognomy;" "A Chart for the Delineation of Mental and Physiological Characteristics," &c. ; 2 vols., profusely illustrated. Philadelphia and London : F. A. Davis, publisher, 1890.

The author states : "Man's knowledge of himself seems not to have kept pace with the knowledge of his surroundings. It is time, therefore, that there should be an accordance of intelligence between the two, in order that, through man's comprehension of his powers and possibilities, he may by scientific methods assist in improving his own life, and in perpetuating a race which shall be an improvement on the present one. This can come only through a knowledge of anatomy, physiology, physiognomy, and hygienic law practically applied. I have endeavoured to put this science in as plain and simple language as possible, in order that the non-scientific reader may not be confused by an ambiguous terminology. The method of classification used in this system of science is in accord with that observed by all naturalists in their classifications of the lower animals, and is based on the forms of the human organism, which are produced by the intermingling of the vegetative, the thoracic, the muscular, the osseous, and brain and nerve systems. These are treated in the order of evolution, from the first evolved to the latest acquired—the true and perfected cerebral system."

The work is of undoubted interest and value. It forms, among other things, a complete illustrated biography of a very large number of the celebrated men and women of the world. As far as we can judge, the criticisms of the author are almost invariably just and instructive. Indeed, much interesting new light is thrown by Miss Stanton upon the

physiognomy and general nature of the individuals whom she has subjected to analysis. We can thoroughly recommend the work to all those interested in the study of practical and scientific physiognomy.

Practical Electricity in Medicine and Surgery. By G. A. LIEBIG, Junr., Ph.D., Assistant in Electricity, John Hopkins University; Lecturer on Medical Electricity, College of Physicians and Surgeons, Baltimore; Member of the American Institute of Electrical Engineers, &c.; and GEORGE H. ROHÉ, M.D., Professor of Obstetrics and Hygiene, College of Physicians and Surgeons, Baltimore; Visiting Physician to Bay View and City Hospitals; Director of the Maryland Maternité: Associate Editor "Annual of the Universal Medical Sciences." Profusely illustrated. Philadelphia and London: F. A. Davis, publisher, 1890.

The authors have endeavoured to set forth in this book, in a concise way, the fundamental principles which are involved in the application of electricity in medical and surgical practice. Electricity is a study which presents many difficulties, and that to arrive at a practical knowledge of the subject (which is, without question, the knowledge demanded by the physician), whatever reading is undertaken, should be supplemented by as much work as possible in the laboratory.

The time required for an apprenticeship of this kind, is, however, greater than the inclination, and indeed, the duties, of the medical practitioner will permit. A treatise on medical electricity, therefore, to be of any value to the physician or the medical student, should be eminently practical, and should deal with such matters only as have a direct bearing upon the requirements of the practitioner. The book should be free from unnecessary technicalities, and only so much attention should be devoted to theory as

is demanded in the explanation of such phenomena as are presented in the medical and surgical uses of electricity. In Part I. the authors discuss in an explicit way the various forms of electrical and magnetic apparatus likely to be of use to the physician in his daily experience with electricity, as well as the most suitable arrangement of all for any given work; the construction and use of galvanometers; the theory of chemical actions taking place in the storage-cell or accumulator, and the best methods of caring for such batteries.

In Part II. are plainly pointed out the effects of electric currents upon the various tissues and organs of the body in health, and it is there shown how these effects are modified by disease. The methods by which these modifications are utilized for the purpose of diagnosis are also indicated.

In Part III. the applications of electricity in the treatment of disease are considered. The methods by which electricity is made available for therapeutic purposes are described, and in subsequent chapters the modes of application of this agent in the treatment of the diseases of the various organs are indicated.

On page 373 is given the history of a case of "elephantiasis arabum," with illustrations of the cure effected by the treatment employed, which the authors give a clear account of, and in which case electrolysis was used with beneficial results. The book is profusely illustrated throughout, and contains a great deal of useful information, and we can strongly recommend it to those employing electricity in medicine and surgery.

Handbook of Obstetric Nursing. By FRANCIS W. N. HAULTAIN, M.D., F.R.C.P.Ed., Physician to the Royal Dispensary; late Clinical Assistant to Physician for Diseases of Women, Royal Infirmary, Edinburgh; and J. HAIG FERGUSON, M.B., F.R.C.P.Ed., Physician to the Newtown Dispensary; Clinical Gynæcological Tutor, Royal Infir-

mary ; late Resident Physician, Royal Maternity Hospital ; President Royal Medical Society, Edinburgh. With coloured plate and twenty-nine wood engravings. Edinburgh and London : Young J. Pentland, 1889.

Dr. Haultain and Dr. Ferguson have produced an extremely useful handbook for the guidance of monthly nurses. Especial feature has been made of the use of antiseptics ; the authors have wisely devoted a whole chapter to this subject. Rules are given as to washing hands, diapers, catheters, vaginal tubes, syringes, sponges, douches, dirty sheets ; death, and visitors. It will be seen from the above list that nothing is omitted.

The work contains a description of the pelvis and female generative organs, a chapter on menstruation and growth of the ovum. The management of normal labour and of the puerperium are carefully described. The illustrations are numerous and well selected. There is a useful glossary of the technical terms used in the book. The work is well designed, and will thoroughly fulfil the purpose for which it was intended.

**SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.**

EDINBURGH MEDICAL JOURNAL, *April*, 1890.

Retroversion and Retroflexion of the Gravid Uterus.

By HALLIDAY CROOM.

Dr. Halliday Croom relates an instructive case of retroflexion of the gravid uterus, and illustrates it by drawings of sections. The especially interesting points are: (1) The extremely altered state of the cervix uteri by thinning from compression, rendering it difficult to define under examination. (2) The curious fact that after Dr. Croom, Dr. Haultain and Dr. Milne Murray had passed the catheter without drawing any fluid whatever, a probationer-nurse, who had never passed a catheter before, drew off at once 116 ounces of urine, of claret colour, ammoniacal and containing pus and blood. Dr. Croom describes the partial relief of the bladder by overflow under reflex contraction, and says this condition illustrates excellently well the axiom that "frequent micturition is a sign of retention of urine." The process is described in "Barnes' Obstetric Medicine and Surgery," and the "aphorism," of which Dr. Croom's "axiom" seems to be a new version, is thus stated: "dribbling of urine is a sign of retention." The patient, after reposition of the uterus, died, and thus gave the opportunity for making some excellent dissections and drawings. The case is a sad illustration of what follows from failure to make a correct diagnosis in time to avert impending catastrophe—when admitted under Dr. Croom's care it was too late.

Spondylolisthesis.

A warm discussion has taken place between Dr. Lamb and Dr. F. L. Neugebauer, junior, on the subject of the

etiology of spondylolisthesis. Dr. Lambl, in language not consonant with rational methods of scientific inquiry, attacks Neugebauer's theory that the sliding of the vertebræ is always produced, in extra-uterine life, without the intervention of any primitive dyscrasia or disease of the bones. He insists upon the truth of the theory he has adopted from Ritgen (1853), who suggested that the primary cause was hydrorrhachis. He fails to support his absolute conclusion by facts. On the other hand Neugebauer, in temperate spirit, cites abundant evidence against the theory of hydrorrhachis. The testimony of Breslau may be taken as expressing the opinions of most of the authorities who have made objective investigations. "Breslau, minutely examining his second case by the light of Lambl's memoir, finds in it no support for Lambl's theory, and foretells for that theory a heavy fall; he discovers no intercalary verterbra; he finds no scar or other trace of hydrorrhachis." Admitting that every pathological question is of more or less importance, we cannot help doubting whether this particular one has not been the occasion of superfluous controversial ardour. At least, in such prominent development as to constitute a real difficulty in parturition, spondylolisthesis is certainly very rare. After all, it may very well be that all cases are not to be traced to one cause. There may be varieties of spondylolisthesis. Hydrorrhachis, or some other intra-uterine condition, may explain some cases, whilst others, the great majority probably, are due to accidents occurring in extra-uterine life. One great impediment to the attainment of scientific truth is that unfortunate weakness of many minds which is incapable of entertaining two ideas not necessarily antagonistic. Such minds can only admit one idea after excluding all others. There is an excellent specimen of the spondylolisthetic pelvis in University College Museum, discovered by Dr. Neugebauer and Graily Hewitt.

Porro's Operation versus Craniotomy.

A condition I would briefly refer to is that calling for what is known as *Porro's operation*, to take the place of craniotomy

or Cæsarian section. I consider it the operation of the future. Where the pelvis, from deformity or otherwise, is so reduced in diameter as not to permit the passage of the child without resorting to some capital operation for its delivery, when such a condition exists, I declare absolutely in favour of abdominal action, and removal of the uterus, and thus save both mother and child; and not only that, but at the same time save the mother from a repetition of this untoward event.

One very great reason in favour of the procedure is its simplicity; the majority of physicians can perform it, or ought to be able to, and with appliances that are always at hand, or to be had, "whereas Saenger's modification of Cæsarian section is an operation not adapted to, nor by any means of easy performance by, the general practitioner." There is another more weighty reason still. What moral or legal right has the physician to take the life of a human being deliberately? I fear we do not justly realise the fearful responsibility assumed, at the time or afterwards, but hide ourselves under the cloak of professional privileges and age-long custom, but ere many years have come and gone I foresee that a very strong term will be applied to designate the man and physician who will so far forget, or fail to realise, his legal or moral position as to deliberately take the life of a human being by performing craniotomy.

I speak, perhaps, in strong terms, but it is by having matters forcibly brought to our notice that we are induced to give them that attention to which they are justly entitled.

The past cannot be recalled, and the degree of personal responsibility is no doubt lessened by the example and sanction of our predecessors; but in the future, when light and knowledge, and the great advance of abdominal surgery, are duly recognised, and the fearful responsibility realised, the man who undertakes to perform craniotomy will be what is sometimes termed brave, but rather callous to universal opinion or personal remorse.

The appliances necessary when one is not in possession of the usual instruments required in performing hysterectomy,

are three or four compression forceps, a piece of rubber tubing of a quarter-inch thickness, two long pins, known as ladies' hat pins, a scalpel, three or four sponges, needle and thread, half an ounce of saturated solution of glycerine with ferri-perchlor., and some ordinary lint or absorbent cotton.

Open the abdomen to the extent of four or five inches, slip the rubber tubing over and around the neck of the uterus, making a tight single tie, and hand to an assistant to hold; open the uterus, remove the child, and pull the uterus through the abdominal opening; tie the rubber tube with a second knot tight, cut off the uterus, pass the two needles at right angles through the pedicle, at the same time through the tubing to hold all in place; the pins will prevent the pedicle from slipping back into the abdomen; sew up the abdominal wound, close to and leaving the pedicle in the lowest angle of it, then trim the pedicle of all superfluous tissue, and tuck small pieces of lint, two or three inches square, under the needles and around the stump, pour the solution of glycerine and iron over the stump, and cover with pieces of dry lint and apply a bandage. If cleanliness is carefully observed your patient will, in all probability, make an uninterrupted recovery, and you will have the satisfaction of having saved both mother and child.

Of course the mortality will depend to a great extent on the early recognition by the physician of the necessity of an operation before the exhaustion of the patient, or contusion of the parts in vain attempts at instrumental delivery.

AMERICAN JOURNAL OF OBSTETRICS, APRIL, 1890.

*Electricity in Extra-Uterine Pregnancy.*¹ By A. H. BUCKMASTER, M.D., Assistant Surgeon Women's Hospital, State of New York.

Much has been said and written during the past year regarding the best method of treating extra-uterine preg-

¹ Read before the New York Obstetrical Society, December 17th, 1889.

nancy, and we regret to say that no small part of the expression of opinion has been of an acrimonious character. This is noticeably so in the writings of the advocates of early abdominal section, who deny electricity any place of therapeutic worth. They plead their cause with a warmth and assurance that at least carries the conviction accorded to positive statements, irrespective of their intrinsic value.

A short time ago electricity was regarded as a proper treatment, and perhaps used in many cases with but little judgment. The weak points of this method have been so strongly urged of late that there is danger of a great reaction. Fashion rules in medicine as in society, and her decrees in the world of thought and action, as in that of fancy and extravagance, are often illogical. A few years ago the abdominal cavity was opened with dread because of the bad statistics. Improved methods have brought better statistics, and the pendulum of public opinion returns, and where once was dread is now reckless daring. I have witnessed more than two hundred abdominal sections, and do not believe that laparotomy under any circumstances is a trifling operation; yet it is so lightly urged as a diagnostic test as to carry the inference that it is without danger. In the hands of the best of surgeons an abdominal section is an operation that is to be avoided, as are all dangerous operations.

Death is not the only penalty of a section that is to be taken into account; intestinal obstruction, hernia, painful cicatrices and abscesses—all follow in the train of this procedure. And even after the belly is opened one may not be able to make a positive diagnosis. I have seen the removal of the appendages followed by such severe pain that a second section was necessary. The second section showed that the cause of the pain was the formation of intestinal adhesions in the line of the incision, the result of the first operation. These adhesions were liberated, but the patient's relief was only temporary, and she preferred to drag out a most miserable life rather than again submit to an explorative incision. The point I desire to emphasise is that laparotomy is not always a

harmless procedure, and is occasionally followed, in the best of hands, by unfortunate results.

It is generally recognised among abdominal surgeons that one of the greatest dangers in operations in this department of surgery is the introduction of septic matter into the peritoneal cavity. To avoid this the greatest care and familiarity with special methods are required, and, for this reason, it can never be a harmless operation or be performed with impunity by the general surgical operator. It is a method of diagnosis not unattended with danger, and yet one that will often be required in cases of ectopic gestation. It would be as unjustifiable to allow a patient to bleed to death from a blood vessel in the peritoneal cavity as to become exsanguinated from a wound of the hand.

There is but one indication, besides dangerous hæmorrhage, for section in extra-uterine pregnancy before the third month, and that is to procure drainage and to avoid septic infection. These indications seem to the writer to be the limitations of explorative incision in these cases, and do not in any way antagonise the field of electricity. The indication for electricity is simply to destroy the embryo before the third or fourth month. It can be used without danger to the mother, and there is no case on record where its proper use has been followed by bad results.

Lawson Tait, in his lectures on the subject of ectopic pregnancy, objects to the destruction of the foetus, and does so in language both unjust and rude; characterizing those who entertain the idea that the sacrifice of the child in the interest of the mother is justified, as on a level with "abortion mongers and reckless craniotomists." His objections might be stated as based on the following grounds:—

1. That it is immoral to kill the foetus.
2. That its destruction affords no safety to the mother.
3. That the means to bring it about are in themselves dangerous.
4. That the means are ineffectual.

If it is necessary to sacrifice the infant to preserve the life

of the mother, it is a rule in obstetrics to sacrifice the child. No system of morality condemns such action. If the mother's existence is seriously jeopardized by the life of the child, and experience shows that the child's chances of survival amount to no more than the chance to become a curiosity in the annals of this class of cases, then, I say, by all means sacrifice the child—assuming that the facts have been presented to the family, and they leave the ultimate decision in our hands. Tait evidently does not believe it to be immoral to destroy the ovum before rupture of the tube, as he advocates its removal at that time. The moral question is raised after it has passed into the layers of the broad ligament ; and we have here the same danger of rupture, but to a less degree, than existed in the tubal pregnancy. It is doubted by him whether this diagnosis can be made often enough to justify much thought for the pre-rupture stage. The recent literature of this subject shows that he is mistaken. Tait has had three living children to show to sustain him in his stand for non-interference. The whole question must be settled from general clinical experience, but I am of the opinion that, unless far better statistics appear (excepting those of Mr. Tait), I should say, in the light of the present showing, destroy the child before the placenta presents such great risks to maternal existence. Mr. Tait is wrong in taking the position that rules should be formulated by exceptional successes ; the mass of operators must make rules from their results. Mr. Tait says that if the child survives the rupture it should be allowed to have its chance ; but there are no symptoms by which we are sure that this rupture has taken place, except in cases not seen until after the fourth month. There are many cases where the histories would lead us to believe that there are no definite symptoms of rupture, and the patient recognises that something is wrong by symptoms from the presence of the mass in the broad ligament. Mr. Tait implies that these cases are defective histories, but we believe there is a better explanation. The development between the folds of the broad ligament must be due to rupture, but the conception of this term usually involves the idea of sudden violence.

Six years ago I made a series of experiments on the recently removed uterus. The uterine termination of the Fallopian tube was dilated by means of a small probe, and through a small blow-pipe the tube was filled with liquid or air. If this was done quickly and with some force, or if the end of the tube was slightly compressed, the fluid or air would pass between the layers of the broad ligament. This demonstrated to me that the direction of least resistance was between the layers of the ligament, and, in those cases where the thinning of the tube is gradual, rupture might occur, with separation of the layers and with but slight hæmorrhage. Of course the position of the placenta when it commences to be formed would be of importance, but before the third month there is no placenta, properly speaking. Gravity would tend to make the point of contact of the ovum most pronounced opposite the junction of the layers of the ligament. If the change occurred gradually and with little disturbance, it would be impossible to fix the date of rupture from the clinical history, and the child's chances of survival would be of the best; whereas a history of the rapid appearance of a mass to the side of the uterus would indicate hæmorrhage of some extent and would proportionately jeopardize the child's chances for life. In this case the cavity containing the ovum would consist of broad ligament and tube. The relations of these cases are obscured when seen at the autopsy and operation table, and it will possibly be found, in such cases as that reported by Dr. Tait, that the fruit sac is composed of tube and of broad ligament.

I have searched in vain for statistics that might help to determine the value of this observation, but have only found that the cases were not reported in a manner to warrant drawing deductions.

I have now reached the second of Mr. Tait's objections, *that the destruction of the fœtus affords no protection to the mother.* I am very much surprised to see Mr. Tait make so unqualified a statement. I have collected twenty cases treated by faradism, fifteen cases treated by galvanism with interruption, two

cases treated by galvanism without interruption, three cases treated by electro-puncture, and two cases treated by galvanism and faradism, and among these there is no case where the death could be remotely traced to the use of electricity as a foeticidal agent.

Tait thinks that if the case is near term and the child living we should operate at once. I am sure this is becoming the general opinion, and I know none of the gentlemen who advocate the use of electricity who would not agree with him. It is only at this time that these gentlemen could possibly be stigmatised by such coarse epithets as those Mr. Tait has seen fit to use. It is before rupture and immediately after it that the use of electricity may be considered. The dangers may be enumerated as follows :—

1. The danger of delay :—
 - (a) From immediate rupture.
 - (b) From rupture by continued growth of placenta.
2. The danger of septicæmia.

I believe that no man is justified in treating a case of ectopic gestation who is not prepared at any time to operate by section, or at least to have near at hand some one who has the ability to operate. Should symptoms of internal hemorrhage appear, the general treatment of hemorrhage is in force. The risk of a few hours, necessary to apply electricity, would not be of much account ; and then, again, in many of these cases the diagnosis is not certain. Here, contrary to what Mr. Tait says, the passage of a proper and effective current will do no harm, even in inflammatory conditions. In regard to the continued growth of the placenta, the subject is in the condition of "not proven." Cases have been cited where the placenta continued to grow (in the uterus) after death of the child—as that case reported by Skene before the New York Obstetrical Society ; but we must remember that the placenta implanted in the uterus is under very different conditions from that in a Fallopian tube. To be sure, several cases have been adduced to show that the placenta, in cases where the fruit sac developed in the uterus, was disproportionately

large to that of the foetus, but this alone does not prove that the foetus had died, as has been supposed. The small size of the foetus might be due to the fact that the placenta was implanted in tissues that were not suitable for it to carry on its function to advantage, and the embryo was insufficiently nourished. Dr. Harris says that an ectopic placenta varies in character, size, and form, according to its peculiar location and the vascularity of the parts over which it may be implanted. Turnbull is quoted as reporting a case where no true placental tissue was found, the cyst at one point being very vascular where the cord vessels are given off. "The placenta may be small and thin or very broad and thin. . . ." The evidence that Mr. Tait brings forward to emphasize the phenomenon of placental growth after foetal death is twofold: first, the so-called uterine "moles." As has already been said, the difference of locality mars this decidedly as an illustration, and, furthermore, in the "mole" other changes have gone on, principally of a fibroid character, which completely damage the comparison. Mr. Tait instances several cases of his own as clinical proof of the continued growth of the placenta, and then gives at length the case of Hart and Barbour. Hart and Barbour's case shows that a tumour "about" the size of a four-and-one-half months' uterine pregnancy contained a foetus "about" the size of a three months' pregnancy. The only thing this case proves (if my edition is like his own) is that Mr. Tait is not careful to quote his authorities correctly. In my book it says the tumour was about the size of a four-and-one-half months' pregnant uterus, and the foetus about the size of a four months' pregnancy. There are but two weeks between the approximate size of the fruit sac and the size the foetus should have attained. In fact, there is nothing in the case itself to show that the placenta grew after the death of the foetus. Mr. Tait's quotation is that the uterine tumour was as large as a uterine pregnancy of four-and-one-half months, and the foetus was about the size of a three months' pregnancy. This makes a better showing for Mr. Tait.

That the means to bring about the death of the foetus are

themselves dangerous. There is no case on record that justifies this statement. Such cases as were quoted by Mr. Tait where large current strength was used with interruptions, or where puncture was added to the current, are not to be considered, for the reason that their use is not advised to-day. But this Mr. Tait does not seem to understand; in fact, his condemnation of electricity is so general as to lead one to think he had never considered it of enough importance to acquire a working knowledge of its effects. Dr. Montgomery truly remarks "that in the derision of the value of this agent we cannot accept the dicta of men who are ignorant of the manner in which it is used, or of those who condemn it without a trial. An agent which is capable of arresting the life of mice and insects by passing a charge through a vessel of water in which they have been placed, as shown by the experiments of Landis, and which will destroy kittens several months old, should be effective in destroying foetal life when brought in close contact with the foetal envelope."

THE CLINICAL FEATURES OF PYO-SALPINX.¹

By RALPH WALDO, M.D.

As at least half of the post-mortem examinations made on women show inflammatory disease of the Fallopian tubes—Henning states three-fourths; Winckel found two hundred and five in five hundred post-mortems—and, while it is most common during the child-bearing period still there is no age, not even childhood, that is exempt, it behoves us to throw all the light possible on the clinical history of these cases, so as to determine the most rational method of treatment. If slight affections of the tubes are going to increase, so as to make the sufferer an invalid, the earlier they are removed the better; but if, on the other hand, the more severe forms of disease, under appropriate treatment, can be cured or so mitigated as to cause the patient very little inconvenience, it is a

¹ Read before the New York Obstetrical Society, November 19th, 1889.

question whether the surgeon is justified in submitting her to the risks of a laparotomy, to say nothing of rendering her permanently sterile. I am well aware that a woman with a double pyo-salpinx is of necessity sterile, but we can all recall women who have been told they were suffering from double pyo-salpinx, who have afterwards become impregnated and carried their child to full term.

The following histories will serve to illustrate the subject :—

CASE I.—Age thirty-nine years ; married eleven years. Menstruation normal, excepting that she flowed for five to six days. Has never been pregnant. For the first few years of her married life she took a vaginal douche after intercourse, to prevent impregnation ; recently has been very anxious to have children. Has suffered from attacks of intermittent fever at irregular intervals for the past ten or fifteen years, also from severe headaches accompanied by marked nervous excitement, for which she has taken morphine in sufficient quantity to have acquired a mild habit. Excepting at times a dragging sensation in the lower part of the back and abdomen, and occasionally a purulent discharge from the vagina, there have been no symptoms that would attract attention to the generative organs. In fact, five years ago she could not be prevailed upon by her attending physician to have a physical examination made.

January 2nd, 1889, she was in a very weak condition, so that it was impossible for her to walk straight. As her weight was between ninety and a hundred pounds, the pelvic contents could be easily examined by bimanual palpation, with the finger either in the rectum or vagina. There was the first degree of descensus uteri, and on either side of the uterus two elongated tumours about an inch in diameter. Pressure on the tumours or movement of the uterus produced marked pain. At subsequent examinations it was possible, by making gentle pressure in the neighbourhood of the tubes, to cause a discharge of pus from the external os. At no time was there a decided fluctuation detected. Her complexion was bad, circulation poor, and there were at times a slight rise in

temperature and chilly sensations. Some of this febrile disturbance was undoubtedly due to malarial poisoning. Occasionally, especially for a week following the menstrual flow, she was melancholic, and for several weeks it was impossible for her to hold a continuous train of thought or write a coherent letter. She frequently had "crying spells," without being able to give a cause. At irregular intervals of from two to four weeks the pain would become more marked in one iliac region, accompanied by increase in the size of the tumour on the corresponding side of the uterus. In a few days this was followed by a discharge of bloody pus from the external os and diminution in the tumour. The amount of this discharge, which at first lasted three or four days, has gradually grown less and the intervals longer, until now it is about four months since one of these attacks.

This undoubtedly was a case of double pyo-salpinx, with the uterine ends partially, or at least very lightly closed, so that the accumulated pus would escape through the tube rather than rupture its walls.

The first thing thought of was the removal of the tubes and ovaries; but as the patient's health was very bad, and as a short time before I had removed a small wart from her neck, which caused marked nervous excitement, and the wound did not unite well, it was thought advisable to wait until her general condition could be improved. She was given tonics, and mild currents of galvanism were used, with one electrode (negative) in the vagina and the other in the abdomen. After giving galvanism three times a week for a month, the condition was not improved, and the treatment was changed to applications of the compound tincture of iodine to the vault of the vagina, and glycerine on tampons, three times a week. When there were no tampons in the vagina, hot vaginal douches were used twice a day.

April 6th, 1889, Dr. C. C. Lee was consulted with, and he substantiated the diagnosis and owing to the patient's general ill-health, did not think it was advisable to operate, if at all, before fall, unless there was a marked change in the local

condition. This course has been followed, and while the tubes are still slightly enlarged and tender, there has been no marked discharge of pus during the past four months, her general health has very much improved, the mind is clear, and she is able to be about and take a good deal of light exercise.

Possibly at some future time it will be necessary to remove this patient's tubes and ovaries, but I do not propose to do it as long as she continues to improve.

CASE II.—Age twenty-two years; single; menstrual history normal; prostitute. States that she contracted gonorrhœa for the first time January 21st, 1889. I saw her first February 26th, 1889. She was confined to her bed with severe metritis, endometritis, and double salpingitis. The tubes could be easily felt. There were marked febrile disturbance and severe pain, so that it was necessary to administer morphine for a number of days. This patient was told that it might be necessary to perform an operation on her, but that we would see what could be done first. She was told that she would of necessity be sterile after an operation; but thinking that there was a double pyo-salpinx, she was also told that probably her present disease rendered her sterile. After using the compound tincture of iodine, glycerine on tampons, and hot vaginal douches for two months, all of the rational symptoms disappeared, but some enlargement of the tubes remained. They were not tender on pressure. She was advised not to have the tubes and ovaries removed unless the disease increased.

June 8th she had an acute coryza, but the tubes were not troubling her,

September 27th she came to my office, and stated that she had "missed her menses" a few days and was afraid that she might be pregnant.

October 23rd, had an abortion at about the second month, she having passed a catheter into her uterus a week before. The metritis, endometritis, and salpingitis again returned. Has been treated the same as before, and is much better but is not entirely well.

From the course of this salpingitis I am led to think that it was catarrhal in nature and not a true pyo-salpinx; and this case is reported because comparatively little has been written on pyo-salpinx excepting in connection with salpingitis in general, and most of that is vague. Most authors have written so as to make me think that inflammation of the tubes due to gonorrhœa of necessity results in pyo-salpinx. R. B. Hall¹ states that pyo-salpinx may be contracted in two different ways:—“(a) by a chronic process, causing dropsy of the tube, which, by repeated attacks of inflammation is turned to pus; (b) it may be rapidly produced by an acute process following gonorrhœa or puerperal disease.”

I have seen a number of cases of salpingitis due to gonorrhœa that have been so benefited by local applications that the patient was not aware that anything was the matter. In most instances, by a careful examination through the rectum, the tubes were found to remain slightly enlarged but not tender.

In conclusion, I will say I believe, as L. Bandl² states, that pyo-salpinx may be developed in two different ways:—(1) “a chronic process causes a hydrops tubæ, which is changed to pus by acute inflammation; (2) it can be rapidly produced by an acute process,” and, furthermore, “a catarrhal secretion in a tube is easily changed to pus by infection from a simple examination, more especially from an intra-uterine, when strict antisepsis is not resorted to.” The indiscriminate use of the sound is probably the cause of a great deal of pyo-salpinx.

The only positive evidence of pyo-salpinx is to obtain pus from the tube by gently pressing it out or by the use of the hypodermatic needle. The latter procedure in most instances is dangerous and should not be resorted to.

Pyo-salpinx does not of necessity follow salpingitis due to gonorrhœa or sepsis, but it is apt to follow very acute en-

¹ Proceedings of the American Association of Obstetricians and Gynecologists, *American Journal of Obstetrics*, October, 1888, p. 1111.

² *Cyclopædia of Obstetrics and Gynecology*, vol. xii.

ometritis from any cause. As a rule it is of slow advent, the patient giving a history of uterine disease extending over years, and her general health is very much impaired. As a rule the symptoms are aggravated at or near the menstrual flow, and in many instances they are increased midway between. At irregular intervals there are usually slight, chilly sensations, with slight elevations in temperature. If you find fusiform swellings, many times more or less irregular, at either side of or slightly behind the uterus, the tubes are probably diseased ; if, in addition to this, they are tender and fluctuation can be detected, especially if there is an increase in the vaginal temperature, in all probability there is pyo-salpinx present.

As to the treatment of pyo-salpinx, the only radical cure is to remove the diseased tubes ; and where one tube only is distended with pus, both should be removed if laparotomy is performed, for the well tube will almost invariably become diseased. If the patient is in very poor health, and by careful manipulation the pus can be forced out through the uterus, it is not advisable to operate, for, as in Case I., the patient can in many instances, be treated by palliative measures so that the disease is decidedly mitigated ; but, on the other hand, if you have a tube that is markedly distended with pus, in spite of the patient's health it should be removed, for the risk of rupture and general peritonitis is very great.

I wish to lay special stress on the class of cases illustrated by Case II., where there is acute inflammation of the tubes, but where they are not markedly distended. In these cases we are very apt to diagnose pyo-salpinx, and remove tubes that if left could be sufficiently cured to allow the passage of an ovum to the uterus ; and innumerable histories prove that these patients, at least as far as their own sensations are concerned, are restored to health without resorting to a surgical operation. These cases should be treated at least from three to six months before an operation is performed, and it should not be performed if they have received marked benefit from the treatment.

TRANSACTIONS OF THE ROYAL ACADEMY OF MEDICINE
IN IRELAND.

*The Treatment of Tubercular Peritonitis by Abdominal Section
and Flushing out, without Drainage.*

By ROBERT O'CALLAGHAN, F.R.C.S.I.

The treatment of tubercular and suppurative peritonitis has within a comparatively short period been rescued from the expectant and practically impotent treatment of the physician, and has now passed into the yearly-increasing domain of the surgeon, and it is not the least of the modern triumphs of our art.

In England and abroad this is a universally accepted fact, but from statistics, we do not appear to have followed in the footsteps of progress as regards this treatment, and we seem slow in accepting the fact that the principles applied to general surgery are just as applicable to that of the abdomen. It is with a hope that a stimulus may be given in this direction by this great *post-graduate* teaching centre, that I venture to bring before your notice this evening my small but gratifying experience, and, as far as I can collect them, the statistics of this treatment up to the present date. In a great many recorded cases the abdomen has been opened under an erroneous diagnosis for ovarian and other tumours, and in exploratory incision tubercular disease has been discovered, the abdomen cleansed and closed, and the patients have done well. I wish, however, to refer particularly to-night to those cases in which this degeneration of the peritoneum has been diagnosed and abdominal section with flushing out of the cavity has been adopted with complete success.

Before going further I will, with your permission, give you a brief history of my cases, and I am not aware of any such being reported hitherto in Ireland :—

CASE I.—James G., aged fifteen, whom I had the pleasure of showing to you at the last meeting of this Section, was admitted to the County Carlow Infirmary, June 7th, 1888. Family history was good, all living, save his mother, who died

of fever. He presented the following appearance :—General emaciation, pale face, dark circles round the eyes, with bright malar flush and hurried respiration ; a large, distended abdomen, very tumid, yet symmetrical. He complained of dull, colicky pains, which were never severe, but came and went every few hours, night and day ; more or less tenderness on pressure ; appetite completely gone ; could only take small amount of fluids, which he frequently vomited ; constipation ; secretion of urine scanty ; skin dry and harsh. He had been suffering in this way for a month previously to his admission and traced his illness to a blow on the abdomen from a boy's head while playing football. He was sent in to me as a case of hepatic dropsy, and at the time, thinking it might be so, I treated him for hepatic mischief, and also painted the abdomen night and morning, with iodine. He, however, got worse daily, and diarrhœa set in. Taking the facts of the case, the age of the patient, the condition of the main organs, I decided in the first week of admission that it was a case of tubercular disease, and that the only hope left to the boy was operative interference. In this diagnosis, his former physician, Dr. W. O'Meara, concurred, and kindly gave ether for me, the pulse at the time being 98, weak and thready ; temperature varied from 100° to 101°. I opened the abdomen in the mesian line, midway between pubis and umbilicus, sufficient to admit my finger, and speedily emptied it of a gallon or more of a sero-purulent milky fluid. On everting the peritoneum I found it covered with little nodules like millet seeds, and on introducing my forefinger in every direction I felt the same state of affairs. With some little difficulty, owing to adhesions, I drew out a portion of mesentery, which looked like the "roe of a fish" or the "inside of a fig." The case seemed so hopeless I allowed Dr. O'Meara to examine this. I then flushed out the cavity with gallons of blood-warm water from the tap, meanwhile massaging the abdomen until the water came out quite clear. Then turning the boy on his side I emptied the cavity as much as possible, put two stitches in the wound covered it with alembroth wool, and put him to bed.

With the exception of a slight rise in temperature on the third day, with sickness and tympanites, which was immediately relieved by a turpentine enema, followed by a seidlitz powder, he made an uninterrupted recovery. On the third week he was up, and had an enormous appetite, which he still possesses. You saw the other evening that there was no trace of disease left; and he is now about to join his brother in Australia.

CASE II.—Bridget S., aged twelve, being an almost similar case, I will refer only to an incident worth mentioning—viz., that after five minutes' careful manipulation, "owing to extensive adhesions," I got into the peritoneal cavity, but, unfortunately, opened the bladder, which was adherent to within an inch of the umbilicus. Despite this serious accident, she got quite well and strong under the same treatment. The wound in the bladder I stitched in the lower angle of the wound, as in cholecystotomy, and it was water-tight in the fourth week.

CASE III.—Mary N. was a case of left lateral encysted peritonitis, at first thought to be by her medical attendant hydronephrosis. The right side, although full of tubercular glands and deposit, was quite separate by adhesions, which formed a large cyst. After the breaking up of all the adhesions, and the same treatment adopted as in the other cases, she is now quite strong, and the glands, which were quite palpable externally, have entirely disappeared.

CASE IV.—Mary D., aged fourteen years. When admitted was very emaciated. Abdomen was distended with fluid. Bad diarrhoea; constant pain and incessant cough, with an evening temperature of 101° up to time of operation. As in the other cases, the peritoneum was studded with miliary nodules, and full of a thick sticky fluid. I broke down many adhesions and cheesy matter, the further treatment being the same as the other cases. She made a perfect recovery, and is now strong and well able to work for her living. During the operation I removed a good strip of peritoneum, which I sent, together with some of the fluid, to Professor Scott, of the

Royal College of Surgeons, who has kindly promised me that he will make a careful investigation of the specimen, so that we may get at the pathology of the disease.

I had two other cases of ovarian tumours complicated with this degeneration, one of which was successful. Of the fatal case I will give you a brief history of the *ante-mortem* state of the abdomen, which will illustrate to you the latter stage of tubercular degeneration in the abdomen.

When the case came to me there was a history of a swelling for fourteen months. Five months previously to my seeing her she was tapped for ascites, and evidently had an acute attack of localised peritonitis. The tumour—a multilocular one, which I showed last meeting here—was adherent in front throughout to a thickened and almost cartilaginous peritoneum. On removing it, I found the liver atrophied and a mass of tubercle. The intestines, covered with miliary nodules, were bright red, and more like those of a fowl. The mesentery was rolled round a portion of them, and the omentum, a firm mass with tubercle, “like a sausage.” I did not flush out the abdomen in this case, for which error I was very sorry, as despite this state of affairs she lived three days with little or no discomfort.

These two last cases, with others, have led me to conclude that if any abdominal tumour is not removed within a reasonable time of its formation you are bound to have this form of degeneration set up as a complication; and, furthermore, illustrates the fact that more knowledge of the symptoms of abdominal disease in its early stage, and that such is now curable, are wanted by the general practitioner, so as to prevent this repetition of criminal neglect—which, I am sorry to say, is too common—the surgeon not seeing them until they are past hope of any treatment, and in many cases they die unrecognised. The first successful case I find in which the disease was recognised before operation, is one reported by Mr. Lawson Tait, in 1879—a parallel case to my own. Since then he has had a great many in all stages of the disease, with a mortality of 15 per cent. In the same year Dohrn operated

on a child four years old, with success. Mr. Treves, in 1883, published several cases—one was in an infant sixteen weeks' old; it died three weeks after of acute miliary tuberculosis; and last month he reports many more cases. Clarke, of Huddersfield, published a successful case (*Lancet*, Nov. 5th, 1887). Koenig gives four successful cases, in one of which he removed a bit of mesentery, in which he found the bacillus tuberculosis. Hofmohl published a case (*Wiener med. Woch.*, 1887). Poter, in the same year, gave a successful case (*Centralbl. f. Gynäk.*), in which he removed a nodule, and found, after great difficulty, the bacillus in giant cells. John Homans, of Boston, gives two cases similar to mine in the *Lancet*, Feb. 5th, 1888. These are the only reported cases I can find in which the disease was previously recognised. Kümmell however, before the German Congress, in 1887, collected 40 cases. In each the cause of operation was erroneous diagnosis. He gives as the earliest case one in which Sir Spencer Wells operated in 1862. He opened the abdomen to remove an ovarian tumour, and found tubercular peritonitis; he simply drained it, and the patient was alive in 1887. Schwartz collected 17 such cases. The age of the youngest was four. Knaggs, Esmarch, Mikulicz, and Wagner have each published cases, and all these great authorities speak equally favourably of the treatment—the best results being obtained from flushing out and immediate closure of the wound.

Mr. Tait now says that we must drop the word "tubercular" concerning peritonitis, as this disease has no kind of association with tubercles in the lung. However, as to the pathology of it we are uncertain, if not entirely ignorant.

I look upon it as a distinct form of tubercular degeneration, the same as met with in joints and bone, and if dealt with early, as in these cases, by operation you will have as simple a cure; but, as in joints, so it is in the peritoneum—if we procrastinate with expectant and palliative treatment, the result will be most unsatisfactory, and such treatment must be looked upon in future as a surgical crime. At this stage in a joint you scrape and if necessary excise it, and, although we

can now remove many offending organs from the abdomen with impunity, we cannot remove the peritoneum. As to diagnosis, statistics show us that many eminent authorities have made repeated mistakes, and the conclusion I have drawn from that is—when I meet a case of distended ascitic abdomen, I would not under any circumstances tap it. It is my practice to open it, “prepared for any emergency,” by an incision sufficient to admit my forefinger, which will enable an experienced surgeon to ascertain in a minute the exact condition of affairs inside. Should it only happen to be simple ascites the result will be sometimes cure; and in any case the fluid will not reaccumulate for a much longer period than if tapped. In malignant disease it gives a complete abeyance for an indefinite period of the agony and urgent symptoms, and in some cases complete disappearance of the growth. This may seem to some of you heroic and incredible; but I can assure you, from personal experience, that it is fact; and that by this treatment not only do you know the exact state of things, but you are running less risk, if any, than plunging a trocar into a distended abdomen, and you are certainly more merciful to your patient. As to the physiology of this method of cure we are equally in the dark, and we have so far only to accept the fact.

In conclusion, I argue from my own experience, and that of others far more competent to judge, that when tubercular or chronic suppurative peritonitis is patent, and that a fair trial has been given to medicinal treatment, it is our duty as honest surgeons to open and flush out the abdomen. The operation in itself being a simple one, but strict attention to detail being more essential, it cannot safely be attempted in general practice. Of the fact that expectant and hopeless treatment is daily persisted in I am painfully cognisant, and I may have more opportunity than many of you in seeing how hard it is to dispel the absurd idea from men’s heads, that the peritoneum is not still the sacred structure that we were taught it was, and, though fully aware of their inability to relieve under those conditions, on conscientious grounds are afraid to

recommend their patients to undergo operation. Is there one amongst us here to-night who has not some time in his experience met with such cases, and felt how powerless we were to deal with them, while they sank daily before our eyes? I must say I look back with regret to my ignorance of this treatment, but most hopefully to the future. This Section can do a great deal to further this, and impress, through its members and literature, on the busy, hard-worked practitioner, that this and other abdominal disease is no longer incurable, and that in cases recognised early and sent up for treatment operation is not only justifiable but certain of success. Then, and not till then, will suffering humanity have a more extensive benefit of the great strides our art has made in its abdominal branch.

N.B.—Since writing this, Professor J. A. Scott reports that he has found the bacillus tuberculosis in the strip of peritoneum that I removed from Case IV., thus proving, undoubtedly, the origin of the disease in these cases.

Notes on my First Cases of Abdominal Section.

I hope that the following brief notes of some cases which I have had under my care during the past twelve months may prove interesting to this Section :—

CASE I.—Mary C. Pyo-salpinx. Date of operation, March, 1887. Age, twenty-six; married two years; no children; one miscarriage nine months after marriage. Since that date she never regained her strength; menstruation became profuse and fortnightly. Ten months ago attacked with severe pain in left ovarian region, with vaginal discharge and great pain on micturition. ("There was a distinct history of gonorrhœa at this period, which was conveyed by the husband.") Active treatment at the time gave some relief; she became more or less bed-ridden, and had periodic discharges of "stinking corruption" per vaginam. When asked to see her, she presented the appearance of a woman very emaciated from continued suffering and suppurative

disease ; pale thin face, with bright malar flush. On bimanual examination a large cyst was felt high up and to the left of the uterus, but between it a hard mass, thought to be fibroid, was felt. On explaining the nature of the case to her friends, I had in consultation my friend, Dr. William Smyly ; we decided to operate at once. On opening the abdomen I found a large tube on the point of rupture, and also a tumour growing from the lateral wall of uterus and filling out the whole of the broad ligament. The tube and ovary were bound down so firmly by adhesions that I only aspirated the tube and washed it out with a 1 in 20 solution of carbolic acid ; the fluid cleared the tube and passed through uterus and vagina. I closed wound without a drain ; it healed by first intention. In three weeks she left her bed, and said she felt as well as ever she did in her life. I saw her three months after ; the tumour was much larger and nodulated, and she died in ten months from date of operation from undoubted malignant disease. She repeatedly asked me to operate again, having had such comfort after the operation.

CASE II.—Sarah B. April, 1887. Fibro-sarcoma. Age seventeen, single. Previous history good. Family history good. Never menstruated. Illness traced by her to slipping on ice while carrying water, when "she felt as if something had given way inside her" in the place the tumour was now to be felt. This was six months previously. "Tumour, when first felt by her, was about the size of an egg ;" grew slowly until a month ago, when it began to grow large rapidly.

Examination revealed a large nodulated tumour in the right iliac region, free from the uterus, moveable anteriorly but attached posteriorly. On opening the abdomen I found a large nodulated growth attached to the outer margin of the broad ligament ; this I enucleated. Hæmorrhage at the time being brisk, but the capsule not being very dense, I was able to shell it out quickly ; tied the bleeding bed of tumour in one large ligature (pedicle silk), excised the remainder above ligature, washed out the peritoneum, put in a drain ; wound healed rapidly ; removed drain on third day,

and patient had not a bad symptom throughout. Tumour weighed three lbs.

CASE III.—Catherine L. November, 1887. Cancer of peritoneum and ovarian tumours. Age, fifty-two; married; four children, all living—youngest eleven years. Previous and family history good. She had been a very strong woman up to menopause three years ago. She noticed a year ago that she was larger in the left iliac region, and did not seek advice until the tumour had grown so large as to cause great discomfort—dyspnœa, constipation. She then consulted a medical man, and was treated for ascites by giving violent purgatives and diuretics, which, I need hardly add, made her case an unfavourable one for operative interference. However, after explaining to her family my view of the case, at her earnest request I decided to operate, and, to my great delight, found my diagnosis correct. On introducing the trocar (Tait's) a thick gelatinous fluid oozed out very slowly. I emptied out the cyst, passed my finger down to pedicle, found it clear of malignant growth; but on trying to separate adhesions above I found the top of the cyst (which filled the whole abdomen) adherent to the peritoneum, and the part so adherent a sago-like mass. On trying to separate this I found the cyst wall broke away like wet blotting-paper, and the peritoneum about it was studded with hard ivory-like nodules, so well described by Sir Spencer Wells in his remarks on cancer of the peritoneum. There was little or no hæmorrhage. I ligatured the pedicle, as taught by Mr. Lawson Tait, and removed cyst; on so doing found a smaller cyst full of clear fluid, which I also removed; then washed out the abdominal cavity with tepid water from the tap until it flowed out clear. I was obliged to leave the upper and anterior portion of cyst adherent, as I found it impossible to strip it. Wound seemed to heal by first intention, but patient sank from exhaustion in sixty hours.

There was nothing in this case to point to malignant disease; no glandular enlargement; abdomen, on palpation, was perfectly even. Had I seen her three months previously

I am certain I would not have to record her death; as it was quite evident that the malignant disease was secondary in the tumour, and of *very* recent date.

CASE IV.—A. F. Dec., 1887. Parovarian cyst. Age thirty, single. Menstruation regular. Previous and family history not good. Sent to me as a case of ascites. No albuminuria or symptoms indicating hepatic mischief. Slight swelling giving no inconvenience; commenced six months ago in left iliac region, extending rapidly over abdomen during the past two months; although much distended, there was not great discomfort, all the symptoms pointing to ovarian dropsy. I opened the abdomen and found a large cyst with no adhesions; a slight pedicle, long and thin, which I tied with Mr. Tait's knot in Chinese silk. The incision was only two inches in this case; wound healed by first intention, and temperature normal throughout.

CASE V.—Mary G. Strangulated umbilical hernia, with radical cure. Age, fifty-five, married; weight, seventeen stone. Old hernia was strangulated thirty-six hours; when I saw her, symptoms very urgent. I did a laparotomy in this case, twisting and tying the sac, with a gratifying result. I only mention this case incidentally, as I intend reading a special paper on this case at a future date.

CASE VI.—Mary B. December, 1887. Large ovarian tumour. Age twenty-three; single. On admission was very emaciated with a bed sore. Had been tapped seven times to relieve the tension of the dropsy, as her medical attendant could not persuade her to undergo operation before. Tumour first recognized two years ago. Pedicle was very broad and thick, so that I was obliged to use two separate silk ligatures to tie it. She made a perfect recovery, with the exception of a small abscess, which continued to discharge until a pedicle ligature came away, which it did in three months, when sinus healed; and instead of the wretched, bed-ridden creature, she is now a fine healthy young woman.

Remarks.—With the exception of the first case, when I had the valuable advice and assistance of my friend, Dr. William

Smyly, I had no further aid than that of my efficient Lady Superintendent. Dr. W. O'Meara gave ether in three cases, and Surgeon D. M. O'Callaghan, A.M.S., in the others; so that in the provinces one labours under some disadvantage; for you who have had any experience of abdominal surgery know well that you may meet with many complications not bargained for when you open an abdomen, and under such circumstances you would feel some comfort with one or two experienced colleagues by your side. But again, I have the advantages over you in the city, of pure country air, few spectators, and private wards; these, with skilful nursing, being great features in the success of such cases.

I used pure water from the tap for ablution, with alembroth, gauze and wool dressing. I am sure you will agree with me that this brief history of these few cases helps to prove the utter nonsense we were taught with regard to the sacred precincts of the abdomen, and that with *absolute* cleanliness and dry dressing, in my experience true antiseptic surgery, the surgeon, provided he has special knowledge of the work, with the essential surroundings heretofore alluded to, can explore the abdomen for diagnosis, or for removal of disease, from which a few years ago many valuable lives were lost through uncertainty of diagnosis, or from fear of surgical interference. This state of things, I am happy to say, is now of the past, thanks to the brilliant results which have been achieved in abdominal surgery by Mr. Lawson Tait, who has opened a new era in surgery, and enabled us to hold out hope of relief to many suffering mortals, if not total immunity from their affliction.

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF
CHICAGO.

Regular Meeting, September 27th, 1889.

The President, CHARLES T. PARKES, M.D., in the Chair.

When does an Ovarian Tumour call for Interference?

Dr. KARL SANDBERG: There is probably at the present time hardly any one who would try any kind of medical

treatment for ovarian tumours with hope of effecting a cure; and of the different surgical expedients proposed and tried for this malady, ovariectomy, the complete removal of the whole tumour, seems pretty unanimously accepted as the only proper operation.

There are still some advocates of tapping in cases of single cysts, and among them as high an authority as Sir Spencer Wells, thinks it should be enforced by almost a refusal to do ovariectomy until it has been tested; but they are certainly very few, and the question may practically be considered settled.

When does an ovarian tumour call for interference? is the next question, and about this there are still very different opinions among the highest authorities. Some operators do not see any indication for interference before the patient's life is in jeopardy; while others think the indication is there as soon as the tumour is discovered. It is worth noticing that we meet the most conservative opinions on American soil.

W. H. Byford¹ thinks we should wait until some condition connected with the growth of the tumour begins to affect the health and thereby threaten the life of the patient. Until the life of the patient is jeopardized by the effects of the tumour upon the general health in some way, we have no moral or professional right to subject her to so great a risk as is incurred in ovariectomy.

T. Gaillard Thomas² does not want to interfere with an ovarian cyst until it is evident that the patient is failing in strength and becoming emaciated, depressed, and nervous; only making exception for small cysts that are removable by the vagina. For these he recommends removal as soon as possible. Where the woman is already of a nervous disposition, he recommends earlier removal. As unfavourable conditions for the operation he mentions depression of spirits and extensive and firm adhesions.

¹ "Diseases and Accidents incident to Women," 3rd edition, 1887, page 628.

² "Diseases of Women," 5th edition, 1880, pages 729-731.

P. F. Mundé¹ considers it unjustifiable to remove an ovarian tumour which neither by its size, location, or symptoms seriously distresses the patient or impairs her health or activity, but considers it equally wrong to defer the operation until the patient's constitution begins to suffer. It seems to him the proper time to operate on an ovarian tumour when the tumour is evidently growing, when sharp abdominal pains lead to the suspicion of localized peritonitis and adhesions, and when the tumour, by pressure, pain or otherwise, seriously distresses the patient. Occasionally he finds moral indications for earlier operation.

Goodell² wants to operate when the cyst has grown so large as to distend the belly, and when the woman has become thin and her health has begun to fail. The reasons for waiting are:—the woman will have lived longer, should the operation turn out to be a fatal one; the abdominal walls are thinner; the patient being less full-blooded, hæmorrhage and inflammation are not so likely to occur; the bowels are crowded away; the peritoneum is less vulnerable. He, like Mundé, admits that there may be moral indications for earlier removal. When pregnancy exists, he thinks we should operate in the first half of the period of gestation.

Emmet³ says all the advantages are now greatly in favour of an early operation, before adhesions have been formed.

Hegar and Kaltenbach⁴ recommend early operation, before the patient's health is seriously affected, but prefer to wait until the tumour has reached the umbilicus, thinking this makes the operation easier.

Schroder⁵ considers the removal of any ovarian tumour justifiable when it has attained the size of a child's head and is growing, the chances being unusually good when the tumour is no larger than this. The only contra-indication he knows

¹ "Minor Surgical Gynecology," 2nd edition, 1885, pages 414-415.

² Pepper, "System of Medicine," vol. iv., page 316.

³ "Principles and Practice of Gynecology," 3rd edition, 1889, page 711.

⁴ Hegar und Kaltenbach, "Operative Gynäkologie," 3rd edition, 1886, p. 245.

⁵ "Handbuch der Krankheiten der weiblichen Geschlechtsorgane," 4th edition, 1879, pages 391-393.

of is where the tumour is malign and the complete removal is impossible. In a case where the tumour has extensive and firm adhesions in the pelvis, or when it is in large part subserous, he thinks it is often advisable to wait until one is sure the tumour is growing; but he warns, at the same time, earnestly against waiting until the patient's strength has begun to fail, because the chances for success are greater the greater the strength.

Olshausen¹ recommends that tumours the size of a fist always be removed when they have a pedicle and are moveable, even if they cause no trouble whatever, on account of the great danger from torsion of the pedicle. Whether smaller tumours should be removed will depend upon how much, if any, trouble they make, and the probable difficulty of the operation. In cases of malignant tumours, he recommends operation, beginning with an exploratory incision, whenever there is no evidence of metastases.

Gusserow² thinks it best to remove even the smallest tumours as soon as discovered. He recommends exploratory incision and removal of malignant tumours, if they can be removed completely.

A. Martin³ recommends removal of ovarian tumours as soon as they are recognized, considering that the prognosis is better the earlier they are removed. The only exceptions are malignant tumours not limited to the ovary.

Spencer Wells⁴ says that he has become more and more disposed to advise the removal of an ovarian tumour as soon as its nature and connections can be clearly ascertained, and it is beginning in any way, physically or mentally, to do harm, since the risk of the operation under such circumstances is certainly less and the possible evils of delay are excluded. But further on he declares it possible to operate too early as well

¹ "Handbuch der Frauenkrankheiten" (Bilroth and Luecke), 2nd edition, vol. ii., pages 650 and 652.

² Clinical Lecture, February, 1887.

³ "Pathologie und Therapie der Frauenkrankheiten," 1885, page 394.

⁴ "Diagnosis and Surgical Treatment of Abdominal Tumours," 1885, pages 38 and 69.

as too late, and states that operations for small, unattached tumours in strong, healthy persons have by no means given the best results. He also formulates the postulate that a woman who has become accustomed to the confinement of a sick-room, and has lost flesh, bears the removal of an ovarian tumour better than one in good health.

Thomas Keith waits for some degree of impairment of health and emaciation (Mundé, "Min. Surg. Gyn."), but prefers that the operation shall be performed early and before the general health has become enfeebled (Bantock, "A Plea for Early Ovariectomy").

Knowsley Thornton¹ recommends early operation, but prefers to wait until the tumour is pushing the abdominal wall slightly forward.

Lawson Tait's² rule is to remove an ovarian tumour as soon as it is discovered, thinking the earlier the operation is performed the more certain the patient is to recover.

Granville Bantock ends his "Plea for Early Ovariectomy" (1881) in the following words:—"I would urge, then, with all the force which the strongest conviction imparts, that ovariectomy should be performed as soon as we can be sure of the diagnosis; believing as I do, that were this rule followed in only a majority of the cases, the success would be much greater than we are even now able to boast of."

At the present standpoint of abdominal surgery, all talk about the great vulnerability of the peritoneum ought to be silenced, and there ought to be only one opinion about the very small risk of opening the abdominal cavity. This has certainly been proved to satisfaction over and over again by the different operators. It also ought to be conceded as *a priori* logical and furthermore statistically proved, that the smaller the tumour, the thinner the pedicle, the fewer the adhesions, and the better the general physical and mental

¹ "Handbuch der Frauenkrankheiten" (Bilroth and Luecke), 2nd edition, vol. ii., page 651.

² "Pathology and Treatment of Diseases of the Ovaries," 4th edition, 1883, page 253.

condition of the patient, the better the chances. G. G. Bantock has shown that out of Spencer Wells' 1,000 cases 599 had adhesions, of these 165 died—giving a mortality of 27.54 per cent. ; 401 had no adhesions, of these 68 died—giving a mortality of 16.95 per cent. Consequently the difference amounts to 10.59 per cent. in favour of no adhesions, or, in other words, of early operation. In his own 185 cases, the percentage is respectively 20.10 per cent. and 5.00 per cent.—making a difference of 15.10 per cent. According to Mr. J. Clay's statistics, of those who had

No adhesions.....	30 per cent. died.
Slight adhesions	40 " " "
Extensive adhesions.....	50 " " "
Extensive adhesions requiring ligature...	70 " " "

Bantock also gives us another table, that speaks for itself or rather for early and easy operation.

Table showing the duration of operation in 183 cases, with the mortality :—

Time occupied.	Cases.	Deaths.	Percentage.
Up to 60 minutes.....	137	12	8.00
60 to 80 "	29	6	20.6
80 to 100 "	10	5	50.0
Over 100 "	9	5	55.5

Hereto ought to be added all those cases that die from want of operation on account of inflammation in or outside of the cyst, bleeding from ruptured blood vessels or gangrene of the cyst caused by twisting of the pedicle, or from other reasons entirely or partly caused by the presence of the tumour. All these cases ought to be added to the mortality of late operation.

Another thing that ought to be taken into consideration is the comparative value of the life of a woman with an ovarian tumour and of one in good health. The life of the first one is always in peril and very often nothing but a burden to her.

When we consider all these factors, I think it should be agreed that it is bad practice to wait "until the patient's health is affected or her life threatened" ; "until she is failing

in strength and becoming emaciated, depressed, and nervous"; "until she is seriously distressed, and her health or activity impaired"; "until sharp abdominal pains lead to the suspicion of localised peritonitis and adhesions"; "until the belly is distended and the woman has become thin and her health has begun to fail"; "until the tumour has reached umbilicus"; "until it is beginning in any way, physically or mentally, to do harm, or until the woman has become accustomed to the confinement of a sick-room and has lost flesh."

None of these conditions are required for any other operation, and they are only reminiscences from the time when ovariectomy was considered preferable only to immediate death. The sooner we throw them overboard the better. An ovarian tumour does always call for interference, and it calls loud enough to make additional indications unnecessary.

Dr. A. REEVES JACKSON: The question which has been presented to us by this thesis is not a new one certainly, but not the less valuable on that account. It is possible that if some of the authors who have been cited were now consulted, they would express different opinions from those given. I think that to-day there is not very much difference of opinion as to when an ovarian tumour should be removed. But the point cannot be settled by the consideration of any one factor. Not only the size of the tumour should be taken into account, but the symptoms which it produces, including the mental as well as the physical. I think that any surgeon, whatever his general views might be, would be guided by the symptoms and surroundings of the particular case, and would operate upon a tumour, whatever its size, if it were provocative of serious symptoms. A recent analysis that has been made by the *Pittsburg Medical Review* shows that some of the opinions we have held in regard to ovarian tumours need further consideration and perhaps modification. As many of you know, there have been published in that journal during the years 1887 and 1888 reports of all the American operations which were sent to the editors, comprising 1,322 cases, nearly 500 of which were laparotomies for ovarian and parovarian

tumours. The general mortality during the three years of 1866-67-68 was nearly 15 per cent. Those cases in which there were extensive adhesions had of course the larger mortality—nearly 21 per cent. In those in which the adhesions were comparatively slight, the mortality was much less—between 14 and 15 per cent. In those cases in which there were no adhesions, the mortality was only a little over 8 per cent. In 43 cases in which the tumours had been known to exist from four to thirty years, there were only three deaths. Surely this fact is an argument in favour of non-interference so long as injurious symptoms do not appear. I have never thought an ovarian tumour should be removed simply because it was an ovarian tumour and discovered. Then, too, there is sometimes difficulty in diagnosis, and this difficulty is frequently removed by the prolonged history of the case. In the early stages we cannot be sure that an ovarian tumour is of cystic growth, and solid ovarian growths do not need such early interference. Operation would of course be imperative in cases in which grave symptoms should supervene—for instance, twisting of the pedicle, repeated attacks of inflammation, whether in the cyst or outside of it. Now that abdominal operations during inflammatory conditions are so frequently successful, this peritonitis would not be so great a bar to operation as formerly. Forty or fifty years ago conservative men did not advise removal of ovarian tumours, generally because of the great mortality, which at that time was not less than 30 per cent., and, if all cases had been reported, would have been shown to exceed 40 per cent. But the same men would not be deterred from operating now, when the mortality is reduced one-half. All the factors must be considered, and each case decided upon its merits. The continuity of the tumour, its size, the effect of its presence upon the patient's mind and body—all these and many other facts must be considered. I do not think we can formulate any fast rule to guide us in settling this question. In my own experience, tumours which had attained to or exceeded ten or fifteen pounds have been, as a rule, more successfully removed than those which did not

exceed one or two pounds. I think there is force in the statement made that those patients who are in apparently full health do not endure these operations so well as those in whom the tumour has made some progress, and has begun to affect the general health. But the question, after all, is one that must be decided by the effect of the tumour on the patient.

I would like to make a supplementary remark on the subject of tapping. An authority—I do not remember who—stated many years ago that tapping, which was then very much in vogue, was really more dangerous than the operation of ovariectomy. In the earlier days of my experience I tapped a good many cases of ovarian tumour; but while I seldom resort to the measure latterly, I am not prepared to condemn the procedure in such a wholesale way as Dr. Nelson does. Indeed, I think there are many cases in which tapping may prolong life and render a radical operation unnecessary. In the tabulated statement to which I have referred, a very large number—about sixty, I think—had been tapped, and the mortality in those cases was only two per cent. higher than in those in which no tapping had been done. So that it does not add so materially to the danger as has been supposed. There are many cases in which an operation must be postponed; the unwillingness of the patient, her condition otherwise than that connected with the tumour, may make it necessary to give relief, and tapping may produce palliation of symptoms for a long time.

Dr. H. P. NEWMAN: While I would not presume to criticise the eminent authorities cited here to-night, I think the remarks made by Prof. Jackson, as to the necessity of making a special study of each individual case, cannot be too strongly emphasized. I have in mind two illustrative cases. One of these I presented to the Chicago Medical Society about three years ago—a dermoid cyst, about the size of a small cocoa-nut, which ruptured and caused death in a young woman twenty-five years of age. The specimen was seen by our President, and the cause of rupture attributed by him to a probable twist in the pedicle. The unfortunate termination

in this case would certainly be an argument in favour of the early operation. In the second instance I was called to Central Iowa to operate upon a woman, seventy-three years of age, who had had for twelve years an ovarian tumour. When I saw her the growth was perhaps two inches above the umbilicus and had been tapped several times during the past year, the last time about two weeks previous to my visit. The patient was strong and healthy for one of her years, and I could not determine that she was suffering, or had at any time suffered, in any way directly from the presence of the tumour, except from the inconvenience when it became large. Complete relief from this symptom had always been afforded her by the local physician in tapping. She was well nourished, and during my stay sat at dinner with the family, ate heartily, and seemed to be in perfect health. I did not advise an operation, although the tumour was large and frequent tapping was necessary.

As far as my limited experience goes, the smaller tumours are often more difficult to remove ; and I would take exception to the statement in the paper that in large tumours which have risen above the pelvis the pedicle is larger and more difficult to tie. On the contrary, in these tumours the pedicle is apt to become stretched and attenuated, while in the small growths it is often short, ill-defined, and difficult to get at and handle.

Dr. A. H. FOSTER : I have had no experience in ovariectomy, but I was called to a patient in labour by one of our Fellows, to remove an ovarian tumour subsequent to pregnancy. I suppose that is a factor that comes in sometimes ; it is mentioned in the paper. I believe our President saw that case repeatedly. I have not heard the result ; she was in labour, and I was called just temporarily.

Dr. W. E. CLARK : From my observation I believe that those cases that have been operated upon early have had more favourable results than those where there has been treatment and the operation has been late. I have about made up my mind that as soon as a diagnosis is made of an ovarian cyst, other circumstances being as favourable as possible, that it should be operated upon immediately. I am in favour of early operation.

Dr. D. T. NELSON: I have but little to add to what has already been said, and the chief thing I think we should all emphasize is that every case shall be studied upon its own merits. Some cases of very small tumours need operation; some cases of very large ones, like the one referred to by Dr. Newman, do not need operation, especially if it is a patient who is going to die very soon from age, and apparently is not going to die very soon from the tumour. I believe that it will be found to be the experience of all, that many small tumours are more difficult to remove than those of moderate size or large size. If there is a question of adhesions, the sooner they are removed the better, before the adhesions begin or are of any considerable number. I think one of the authorities cited advocates the tapping of tumours before their removal. I hope the Society will express an opinion as to that. If, in the opinion of the physician in attendance, there is no need of tapping for diagnosis, I should say never tap an ovarian tumour. In a case like the one referred to, where the general health was not being impaired, where the patient was apparently well nourished and had been tapped before the days of modern surgery and modern appliances in the treatment of these tumours, and adhesions seem not to have been formed by the process, possibly it might be well to continue for a time longer, until the general health is more impaired or she die of some other disease. In regard to the question of impairment of general health, I believe none of us will wish for patients in poor health, but all will want patients in perfect health or as near perfect health as possible. And I think the experience of some who have placed themselves on record in former years, but would not now, is that they prefer a moderate amount of impairment of health, a moderate loss of flesh perhaps I would better say, and a moderate amount of experience in the sick-room modifying their desires and habits somewhat. We want patients in perfect health, but I think some of the most obese patients are not in sufficient health for such operations, and I think eventually we shall, like those training for the ring, reduce the flesh of our patients before we

commence such operations. What we call the most perfect health I think sometimes means simply *avoir du pois*, means a ruddy countenance and full flesh, which does not necessarily mean to the physiologist perfect functional activity of all the organs; and I think, for so serious an operation as ovariectomy, the patient should be put in the best possible physiological condition as to bowels, kidney, skin, and every other organ. I believe by so doing we shall improve our patients and improve our records. The condition of all other organs should be noticed most carefully. Every now and then a practitioner has a patient who does badly, and he finds at the autopsy, or in some more careful examination, perhaps, without an autopsy, that there is serious disease of some important organs, like the kidneys or lungs. While this does not necessarily prevent an operation, it should make us careful in operating. I believe we are sometimes justified, in cases with serious disease of the kidney (certainly with serious disease of the heart and extensive disease of the lungs), in operating upon these tumours. The other disease is likely to sooner destroy the patient with the tumour than if it has been removed. I have seen such a case within six months, and I believe the patient has done well so far as the tumour is concerned, but probably tuberculosis will destroy her. Yet I think she will live longer with the tumour removed than with the tumour and tuberculosis. So, as I said, I believe every case must be studied carefully by itself. If we can allow a tumour to grow to be of moderate size, about the size of a foetal head, without gaining adhesions or serious impairment of the health, or injury to the patient, I should rather have it than a smaller one to remove, and I believe the patient will make a better recovery.

Dr. H. P. MERRIMAN: My idea is that when a woman has an ovarian tumour she has a trouble that is hurtful from the beginning—it is a cause of ill health, and the longer it exists the worse it is for her. So on general principles I am in favour of removing an ovarian tumour as soon as it is diagnosed, unless there are plain indications against it. There may arise certain questions. One of the first of these would be the

question of adhesions ; another is certain complications, like inflammations in the pelvis, that may be entirely independent of the tumour ; a third question would be pregnancy, and a fourth would be, possibly, the state of health of the woman—it might be best to improve her general condition before the operation was performed.

I reiterate that unless there are objections, unless there are strong reasons for not operating, I believe in removing an ovarian tumour as soon as the diagnosis is certainly made. My own experience is that adhesions have no special relation to the progress of the tumour, and I have seen them just as bad in small tumours as in very large ones.

Dr. BAYARD HOLMES : Mr. President, I would like to refer to the cause of such a high mortality in those cases in which there are adhesions more or less extensive. The mortality in those cases is of course occasionally due to hæmorrhage from the blood vessels in the denuded places, but I think that the ordinary cause of death in those cases is sepsis. Some late experiments of Rinne, just published in *Langenbeck's Archiv* (Bd. xxxii., pp. 1-96), would seem to indicate the relation which these extensive adhesions and the necessarily denuded portions of the peritoneum have to death from sepsis. The experimenter injected into the healthy peritoneal cavity of animals, considerable quantities of pus from abscesses ; he also injected pure cultures of pyogenic bacteria, and did this daily with considerable care, with a small needle. In all cases there was complete absorption of the pus and complete destruction of the pure culture. It was attended by only a transient peritonitis, and accompanied by only the most trivial elevation of temperature. But when a portion of the peritoneum had been removed so as to leave the connective tissue exposed, even the injection of very small quantities of pus, or a very much diluted pure culture of pyogenic bacteria, resulted in a protracted peritonitis and a sepsis which invariably proved fatal. These experiments show that the uninjured peritoneum is capable of taking care of a large amount of septic material while uninjured, which is not the case when a focus of connective tissue or denuded

tissue of any kind is exposed to infection. The denuded point becomes the seat of infection, and furnishes a constant flow of infection of the peritoneum until the resistance of that organ is overcome and a general peritonitis supervenes. I think that the indication is well stated by Dr. Sandberg. Operations should be undertaken before adhesions are formed, which are shown to be so dangerous in their results.

Dr. C. T. PARKES: I am confirmed in my opinion that, as a general proposition, the presence of an ovarian tumour is a source of danger to the person who has it, and as soon as surrounding conditions can be settled, an operation for the relief of the tumour should be done.

I am in accord with Dr. Merriman in reference to small tumours. It seems to me that it depends somewhat upon the method of development of the tumour, whether it has a pedicle or not. I am half-way convinced that tumours that have pedicles have pedicles from the first and the pedicle grows with tumour, and those that are sessile are sessile from the first. Those that are broad in their development at first are apt to be small and confined to the pelvis, and under any circumstances difficult to remove. I think the number of tumours, small in size, which are apt to be found in the pelvis and can be relieved by vaginal tapping are few. In my experience, most of these tumours have been ruptured cysts that are emptying their contents into the abdominal cavity, where vaginal tapping would be worse than useless, and abdominal section the only means of entire relief. In every case of this kind coming under my care, they have been difficult and have left large spots exposed to the dangers of infection. I think you cannot go beyond the general proposition that the sooner the tumour is taken away the better for the patient, the operation, of course, being preceded by a careful diagnosis. We can imagine cases, such as those complicated with pregnancy, in which tapping should be done as a relief to the patient, rather than an operation for removal. I think tapping can be rendered perfectly innocuous by antiseptic methods and by care in the removal of the contents. Again, we must not fail

to remember that there are many cases on record in which the most careful of men have diagnosed the presence of an ovarian cyst where a full and complete tapping has entirely cured the patient, especially in the case of broad-ligament cysts. So where there are no bad symptoms except distention, it is justifiable to try tapping alone as a cure. I am inclined to believe that the old method of tapping without antiseptic precautions was a dangerous thing to do; and even now, with antiseptic precautions, one will meet cases in which the cyst fluid is so deleterious that any portion getting out into the peritoneal cavity would be a source of great danger.

There can be no question as to the necessity of immediate removal in the case Dr. Newman mentioned.

There is one point that the paper brought to my mind after Dr. Holmes made his remarks about the dangers of infection from a broken surface. That is when the author makes the assertion that there is no danger in attacking the peritoneum, that the idea that it is at all vulnerable should be dismissed. I do not believe the proposition, and I do not think any man should do abdominal surgery who is governed by that idea. It is vulnerable, and the slightest abrasion of its epithelium opens the pathway to the worst of sepsis.

If for no other reason than the almost universal presence of the pus microbe, than the great possibility of neglecting the minutest scrutiny of every surrounding during all operations, it appears to me dangerous to advocate the almost total invulnerability of the peritoneum. It is doubtful if any other tissue in the body responds more rapidly, or its response is attended with greater fatality, than the peritoneum to this irritation. Truly an avoidable infection, but is it likely to be avoided if one believes that the tissue concerned is invulnerable?

Dr. T. J. WATKINS: I think a wrong impression may be given by the quotation from Emmet in regard to this case. Whenever the cyst is confined to the pelvis he is in favour of waiting until it grows to sufficient size to be elevated outside of the pelvis, thereby lengthening the pedicle, unless there is

some indication for operating before then. He is also very conservative when there is a suspicion of the cyst being a dermoid; and in a young patient where the cyst has remained a long time and is growing very slowly, and is giving her no trouble, he thinks it is entirely wrong to operate under those circumstances. As you all know, the fluid of the dermoid cyst is very dangerous if any of it escapes into the peritoneal cavity, and I think when the cyst is confined to the pelvis it may be a great mistake to do laparotomy, even though it may be giving a good deal of pain; for after the abdomen is opened it may be impossible to remove it, or if it is removed it is done at the risk of great hæmorrhage. If we do not remove the cyst it is often aspirated, or may be punctured and drained from the vagina. In such a cyst, I should be in favour of aspirating first from the vagina.

CORRESPONDENCE.

THE ÆTIOLOGY OF PUERPERAL FEVER.

To the Editor of the British Gynæcological Journal.

SIR,—The following case, as showing how obscure the ætiology of puerperal fever may be, will possibly interest your readers :—

Mrs. A., aged twenty-seven, was delivered of her second child, a boy, living, on December 27th last. The labour, which lasted about four hours, was perfectly easy, natural, and uncomplicated; slight pressure over the uterus, causing the almost immediate separation and expulsion of the placenta, and no hæmorrhage occurring.

The patient did quite well until the third day, when on awakening from her night's rest, a vacant expression about the eyes, and absence of mind, were noticed. There was no tympanitis, swelling, or tenderness over the abdomen, and nothing unusual was discoverable per vaginam; but the pulse was 120, the temperature 103.5, and the discharge had nearly ceased. The symptoms remained almost unchanged until the fifth day, when the *external genitals swelled considerably*, and the vagina had become hot, dry and tender; vomiting occurred twice, and the abdomen was distended with flatus, and painful on pressure. The aspect became distinctly deathly; there was a well-marked internal strabismus, and typhoid symptoms set in, with picking at the bedclothes, muttering delirium, &c. Pulse at this time almost uncountable from its weakness and rapidity, and temperature 105.5. Constipation was the rule from the commencement, and the patient never once complained of pain. She died in a state of coma on the sixth day.

On the first appearance of symptoms, syringing with Condy, hydrarg. perchlor., &c., was started, and continued all the time, and salicylate of soda and quinine administered, but without benefit.

Every imaginable cause for the attack was discussed, the possibility of scarlatina and drain infection being especially considered, but none was found, until finally it was elicited that *fifteen months* previously the husband had suffered from a severe attack of erysipelas

of the head and face, and had during his illness occupied the very bed on which Mrs. A. was confined, it never having been disinfected, except in the most careless and insufficient manner.

Was not erysipelas the cause of the puerperal fever? and if so, should not patients be warned never to be confined upon a bed which had previously been used for a case of erysipelas?

Other points worthy of note are—first, that my patient had suffered from whitlow during her pregnancy, which, however, had quite disappeared at the time of her confinement; and secondly, that her sister had, two years previously, died of puerperal fever.

I am, Sir,

Yours truly,

J. F. HOWARD CLARKE.

NOTES.

BRITISH MEDICAL ASSOCIATION.—Fifty-eighth Annual Meeting, Birmingham, July 29th, 30th, 31st and August 1st, 1890. Section C, Obstetric Medicine and Gynæcology. *President*, Thomas Savage, M.D., F.R.C.S.; *Vice-Presidents*, C. J. Wright, M.R.C.S., James Murphy, M.D. In the above-mentioned section at the annual meeting, arrangements have been made for the following important subjects to come under discussion: 1. "On Modern Methods of Managing Lingering Labour," to be opened by Dr. W. S. Playfair. 2. "On the Importance of Gonorrhœa as a Cause of Inflammation of the Pelvic Organs," to be opened by Dr. George Granville Bantock. 3. "On the Relief of Labour with Impaction by Abdominal Section, as a Substitute for the Performance of Craniotomy," to be opened by Dr. Murdoch Cameron. The following gentlemen have already promised to take part in the above-mentioned discussions:—Dr. Auvard, Paris; Dr. Elder, Nottingham; Dr. Imlach, Liverpool; Dr. Aust Lawrence, Bristol; Dr. Smyley, Dublin; Lawson Tait, Esq., Dr. J. R. Morison, Newcastle; Dr. Braithwaite, Leeds; also Dr. Macan, Dublin; Dr. Cullingworth, London; Dr. Goodell, Philadelphia and Dr. Fancourt Barnes, London.

It is proposed that a series of Clinical and Operative Demonstrations shall be given on the morning of each day before the work of the section begins, by Dr. Savage, Mr. Lawson Tait and Mr. J. W. Taylor. The following papers have been promised for this section: D. Berry Hart, M.D. Edin., "On the Displacement of the Placenta in Extra-Uterine Gestation." W. L. Reid, M.D. Glas., "On a Simple Form of Axis Traction Forceps." J. S. Nairne, F.R.C.S. Edin., Exam., Glasgow, "Some Additional Points in the Surgical Treatment of Cancer of the Uterus, with a Retrospect of the Twenty-Three Cases Reported at Meeting, 1889." Murdoch Cameron, M.D. Glas., "On Cæsarian Section with Three Successful Cases." (Dr. Cameron will also show a pair of axis traction forceps.) J. K. Kelly, M.D.,

Crosshill, Glasgow; C. E. Purslow, M.D., 192, Broad Street, Birmingham, *Hon. Secs.*

ZWEIFEL has observed on several occasions when laparotomy has been performed by gas light, that not only the patient, but the operators experienced a slight roughness of the throat, especially when the operation was a protracted one. Several patients who had undergone operations at the Gynæcological Clinic at Leipsic, in which this roughness was experienced, subsequently developed catarrhal pneumonia. A patient who had completely recovered after operation afterwards succumbed to this pulmonary inflammation. The cause is sufficiently obvious. The chloroform becomes decomposed by the light of gas or petroleum. The smell of the products of this decomposition has sometimes become so pronounced that it has been thought some material was burning in an adjoining chamber.

WE learn with much regret that Dr. J. B. Hunter, of New York, died in June, 1889. He was a Fellow of the British Gynæcological Society.

PROFESSOR PAJOT.—The *Figaro* has published an admirable profile in writing of the illustrious master of the art of obstetrics, from which we make the following extracts: "Two passions have dominated his life, fishing and obstetrics. When he was poor and unknown he laid the basis of his future renown by giving daily free courses, to which practitioners flocked in crowds. In 1863 he was unanimously elected to the chair of theoretical obstetrics, which he only quitted in 1883, on the death of Depaul, for that of clinical professor. But he has always been an exceptional lecturer, owing to his oratorical powers and his originality. To captivate his audience he brought all his powers into play, and his lectures were made up of brilliant passages, literary and political allusions, anecdotes and *bon mots*. His sayings have become aphorisms. Thus, in speaking about the use of the forceps, he says: 'The rule is inflexible; always to commence by applying the left blade with the left hand on the left, and all ought to be *gauche* except you, the operator.' A precept thus formulated is never forgotten. He frequently amused his *confrères* by his apt allusions and humour. Thus when the subject of the use of chloroform to ease the pain of labour was under discussion, he

pointed out to his colleagues the following advertisement of a dentist : 'Extractions with pain, five francs ; without pain, twenty francs.' This was not a rigorous scientific conclusion, though it was a humorous way of putting one of the professional aspects of the question, for the giving of chloroform entailed a higher fee. Professor Pajot is one of the great medical celebrities of Paris, and though he has retired from teaching, yet he is as vigorous as ever."

ULYSSE TRÉLAT.—This well-known surgeon has just died after a short illness. From 1864 to 1867 Trélat was surgeon to the Maternity at Paris. He occupied himself to a very large extent in the diseases of women. He wrote numerous interesting papers on perinæorrhaphy, on the treatment of vesico-vaginal fistula, salpingitis, retroversions, prolapse of the womb and other cognate subjects. His clinic at the Charity Hospital was one of the most popular in Paris, always attracting a large class.

THE will of Dr. Protheroe Smith, late of 42, Park Street, Grosvenor Square, was proved on December 30th, the value of the personal estate being £49,000. The testator leaves £500 to the Hospital for Women, and the rest to be divided between his four children, one of whom is Dr. Heywood Smith, the well known gynaecologist.

THE Obstetrical and Gynaecological Society for the North of England was formally inaugurated on the 17th of February, in Manchester, by the adoption of rules of membership and the election of officers. Professor Wallace, of Liverpool, was elected the *First President* ; Dr. Walter, of Manchester, the *Hon. Treasurer* ; Dr. Sinclair, of Manchester, the *General Secretary* ; the *Vice-Presidents* were Dr. Lloyd Roberts, of Manchester, Drs. Burton and Alexander, of Liverpool, Drs. Wright and Braithwaite, of Leeds. The *Hon. Local Secretaries* appointed for each centre are: Dr. Briggs for Liverpool, Dr. Donald for Manchester, Dr. Rumbold for Leeds. The Council consists of eight members nominated from each centre, in addition to the officers named.

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THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, APRIL 9, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 17 Fellows, 3 Visitors.

The following were elected Fellows of the Society: Dr. J. S. Hill, London, and Dr. Holmes, Oregon, U.S.A.

A Case of Removal of a large Myxoma from the Pelvis. By
W. H. FENTON, M.D., M.A.Oxon, Physician to the
Out-patients, Chelsea Hospital for Women, Surgeon to
the Royal Maternity Charity.

Elizabeth R. came under my care as an in-patient at the Chelsea Hospital for Women on the 11th February, 1890. She was a well-nourished woman of forty-four years of age. Her aspect was singularly placid, and had none of the peculiar drawn pinched look so often associated with abdominal tumours. She had been living as a married woman for fourteen years, and thirteen years ago had borne one child. No pregnancy had occurred since that date. Four

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years before admission patient had a fall, after which, she stated, a lump made its appearance in the left side, indicating the iliac fossa as about its situation. It caused her no pain, but gradually grew till, as on admission, it appeared to fill the whole abdominal cavity, her girth at the umbilicus being forty-two inches. During the whole time of its growth she suffered no pain and had no attacks of vomiting; she lost no flesh; the functions of defæcation and micturition were in no way interfered with. She earned her living by going out charing, and was able to work right up to the time of coming to the hospital.

Physical examination disclosed that the abdomen was entirely occupied by a large rounded tumour springing from the pelvis below and disappearing under the diaphragm above. It was most elastic, but gave no evidence of a fluid wave. The percussion note dull all over the front of abdomen; resonant in both loins. The abdominal wall, though tightly stretched, was thick and fleshy. Examination *per vaginam* enabled one to feel a rounded swelling through the post-vaginal wall at the upper part, but it was impossible to reach the uterus with the finger, and this is an important indication in the light of what subsequently happened.

On February 13th the patient was prepared for operation, *i.e.*, the belly carefully washed, bladder and bowels emptied.

Operation.—Under ether, a comparatively small incision was made in the median line, and a smooth elastic tumour, perfectly free from adhesions, was come upon, filling the false pelvis and reaching to the under surface of the liver and stomach above. An exploratory thrust with a trocar drew off no fluid, but blood spurted furiously from the wound, which was clamped at once. The abdominal incision was then enlarged to midway between the umbilicus and the ensiform cartilage, and with some little difficulty the tumour coaxed out through this long gash. It was taken to be a large, soft fibroid of the uterus. On either side of the mass, about the junction of its lower fourth and upper three-fourths, the two ovaries and tubes projected like ears. The

wire of the *serre-nœud* was passed easily enough below these appendages and tightened up, a circular incision being made above the wire by several inches, and the bulk of the tumour amputated. Blood and juice poured out as the cut was being made to the extent of many pints. The wall of the tumour was seen to be a tough kind of membrane, which would not strip off its core as a tumour capsule so often will. The core consisted of a rough, irregular meshing of very friable kind of tissue, entangling quantities of a thick sticky juice about the colour of honey, and was as disagreeable to handle as office gum. No blood vessels appeared to run in the tumour, but could be seen in large numbers and size in the false capsule. The wire was tightened up as this stuff poured out and allowed the stump to contract, and a fresh amputation performed lower down, leaving, however, still some two and a-half inches above the wire. This being done, it at once became manifest that in the fore part of the stump a cavity lined with mucous membrane had been opened. A sound was passed into the bladder, and by its manipulation it was soon proved that that organ was intact. Digital examination of the vagina demonstrated that the upper portion of that canal had been cut right through. Inspection of the part amputated showed that it contained the entire uterus and the upper part of the vagina. The bulk of the stump above the wire was reduced to manageable dimensions. It may be mentioned that at the first amputation the stump in point of size was about equal to a section through the middle of an ordinary thigh.

Just as the toilet of the peritoneum had been completed and the final stage of pinning the stump and sewing up entered upon, a large vessel started bleeding just where the wire encountered the tightly-stretched edge of the left broad ligament. This point was seized and controlled by a pair of right-angled clamp forceps, which were left on and projected from the wound like the *serre-nœud*. After very careful coaptation of the edges of the wound the stump was dressed with dried persulphate of iron, and the patient was carried to her bed showing wonderfully little evidence of shock.

The first twenty-four hours after operation the patient looked and seemed to be doing well; the tongue was moist, pulse strong and even—eighty-four per minute; if a fault was to be found with it, it was too hard and tense. Very little sickness; no evidence of shock. Some flatulence, sighing frequently, and a pain in back with desire to pass urine made up the rest of her symptoms. Our resident medical officer, Mr. Wadham, passed the catheter at intervals of about four or five hours, with the result that on one occasion one drachm of urine was drawn off. During the next day patient became a little more flushed, intellect quite clear; the desire to pass water left her. The sighing was exchanged for a hiccough, the flatulence greatly increased, temperature rose to 100·4, pulse remained eighty-four per minute and was noted to be tense. The skin did not act. No water was drawn. The third day the pulse rose to ninety-two, temperature to 100·6; patient got a little restless and drowsiness passed off. Face was flushed and tongue kept moist; complained of no pain and seemed really very little distressed. The stump was quite dry. No urine obtained. As the probabilities were that I had caught the ureters in the wire of the *serre-nœud*, I felt the only course was to get rid of the stump and with it the wire as early as I could, so as to release the ureters. Patient's strength was holding out, and it seemed that if the block to the uterers could be removed she might yet recover. Accordingly I gave directions that the stump above the pins should be whittled away by degrees. This was at once commenced. The clamp forceps, too, were released from what had been the bleeding point. At 11.30 p.m. on February 16th, eighty-one hours from the operation, five drachms of urine were drawn from the bladder. On the following morning at a time not precisely stated in the notes, three drachms more of urine were drawn off. It was examined and found to be faintly acid in reaction, and did not contain any albumen. During this time the stump was being cautiously cut away, and at four o'clock on the 18th February, or about 122 hours from the operation, the stump was cut away above the

pins, and the remainder of it allowed to drop back, although this was only five days from operation. This probably released at all events one ureter, as six hours later, 128 from operation, twelve ounces of urine were drawn from the bladder, acid in reaction, sp. gr. 1009; no albumen, no blood. During the next fourteen hours 109 ounces were collected from the bladder, besides pints which flooded the bed from the wound and from the vagina.

Throughout this period of suppression of urine there was never any evidence of any collection of fluid in either loin or in the abdomen. As to its having collected in the bladder, and there being a failure to draw it off, I may mention that the catheter was generally passed by Mr. Wadham, who is most skilful in such matters; and further than that, with the stump firmly pinned down, I do not see how the bladder could receive much urine.

I believe all this urine was secreted by the kidneys in the few hours that had elapsed since the pressure was taken off the ureters. Our experience of the enormous quantities of urine which can be secreted in a short time under the influence of fear, or the nervous condition known as hysteria, quite agrees with this.

On the following day a drainage tube was passed through the abdominal wound into the vagina and allowed to project from the vulva so as to direct the flow of urine into a receptacle. As soon as this arrangement had been made the patient improved very much, passed good nights, took her food well; the flatulent distension and hiccough disappeared. In fact all went well up to March 4th, nineteen days from the operation, about equal quantities of urine being drained off by the tube through the wound and vagina and passed *per urethram*. At this point a marked diminution took place in the amount of urine passed from the bladder, the quantity draining away remaining the same. The urine coming from the bladder dropped to seven, six, four, one, ounce per day, and once 3ij only were obtained during one period of twenty-four hours. The urine which passed through the

bladder became more and more purulent and most horribly foetid. The urine obtained from the drainage tube was a little turbid, and soon became alkaline and ammoniacal on standing.

The situation then appeared to be this, that one ureter had been caught in the wire of the *serre-nœud* and severed the other, being only temporarily blocked probably by kinking from dragging up the stump. This is how I account for the nine drachms of urine obtained from the bladder in the twelve hours immediately after the operation. The kidney with the severed ureter was apparently doing good work, secreting on the average twenty-nine ounces of fairly healthy urine in twenty-four hours. The kidney which had still some connection with the bladder was evidently undergoing complete disorganisation. The patient during this time was going rapidly from bad to worse. She took less and less food. The abdominal distension returned, as also the hiccough and flushing of the face, but, just as during the time of urinary suppression, the mind remained clear and there was no twitching of muscles or convulsions. She gradually sank and died on March 10th, just three days within the month from the day of operation:

By *post-mortem* examination it was noted that the body was much emaciated; that the abdominal wound was healed throughout its length except a small opening at the lower end leading down to the vagina; this opening was shut off from the abdominal cavity by a thin layer of organised lymph which cemented together adjacent coils of the small intestine. The abdominal cavity contained no fluid; the intestines were free from one another, no adhesion being apparent except just where the stump had been, but they were enormously distended with flatus. On removing the bowels and inspecting the kidneys and ureters *in situ* under their coverings of fascia, little or no fat being present, no abnormality was apparent except the right ureter was about double the size of the left. On making a button hole into the left ureter and introducing a probe it passed readily up to the

kidney and down along the edge of the pelvic brim, escaping through an opening just at the outer margin of the fistulous track into the vagina and some two inches short of the bladder.

The right ureter similarly treated showed much the same thing, the probe demonstrating that the ureter came to an untimely end at the pelvic brim or the right margin of the fistulous track of the stump. There was an escape from the right ureter of the most horribly offensive purulent stuff similar to that which for several days had been drawn from the bladder.

The kidneys which I have brought here to-night were examined, and showed that the pelvis of the right one was distended somewhat with pus, had a phosphatic deposit in it, and the pyramids were undergoing destruction. The left kidney was a deep red colour, peeled readily and weighed within two drachms the same as the other, viz., nine ounces. Clearly then the patient died from the injury received by the kidneys from the prolonged obstruction of the ureters, viz., five complete days. It was singular that the one which remained up to the last in connection with the bladder was the one which was most disorganised. This I attribute to the fact that many catheterisations of the bladder had been made prior to the appearance of the urine, and thus inflammation of the bladder started, which inflammatory action crept up the right ureter to the bladder. The left, which was completely cut through from the first, and poured its stream of urine through the vagina, continued to secrete fairly healthy urine to the last. The first question that arises to me is this: could I in a similar case avoid the same accident of injuring the ureters? It must be remembered that I had a huge tumour with a very thick pedicle. I naturally selected the narrowest part below the ovaries for engaging with the wire, and I thought that the wire at that point was encircling the cervix uteri. I had no idea the pedicle really consisted of a portion of the tumour apparently growing from the posterior vaginal wall and the vagina itself, and that I was some inches below the os uteri. An inter-abdominal

hysterectomy performed in such a way would be bound to include both ureters, as they ordinarily pass from behind the cervix uteri to the base of the bladder. But in a case such as this they may be pushed anywhere by the tumour, as burrowing under the peritoneum it rises eventually into the abdominal cavity. I feel that had I bethought me more of the importance of the negative symptom of *not* being able to feel the uterus from the vagina without an anæsthetic I might during the operation have got an assistant to thrust a hand into the vagina and used his fingers as a guide to keep a little above the vaginal roof. Very little more room—and in this way I should have allowed a good deal more—would have kept me clear of the ureters. Any one who saw the operation would, I am sure, say that enucleation was out of the question. The capsule though distinct would not peel off, nor would the juicy ill-defined substance of which the body of the tumour was made up, shell out. But on this point I shall ask for the free criticism of the Fellows. Perhaps some may have had parallel cases which may have led them into similar difficulties.

It was very interesting in this case to note how remarkably little profound disturbance there was to the health during the five days no urine was secreted, the prominent symptom merely being pain in the back, which soon went, flush of the face, hiccough, and great flatulent distension of the abdomen, which symptoms returned when the fatal urinary complication came on, being entirely absent during the fortnight patient did well.

On referring to the medical and surgical text-books in use, I was surprised to find how little was to be found on the subject of suppression of urine. After carefully dispelling the mists which I think must exist in the reader's mind, preventing his being able to distinguish between the meaning of the two words, *suppression* and *retention*, they leave the question with the baldest statements. In one instance we have under the head of suppression of urine the following mixture of cases. One where a patient secreted no urine for nine days,

and yet recovered and did well ; no cause given. Another is mentioned of suppression, twenty-two weeks ; no cause given. Another, no urine secreted up to seventeen years of age ; and yet what can there be in common in such diverse cases as these must be ? From the French hospitals I am not surprised to observe cases of girls who have discharged urine vicariously from the stomach ; however, it was by close examination discovered that these girls not only drank the urine first but secreted and passed it in the ordinary way before drinking it.

Roberts on urinary and renal diseases mentions a case of a man who died after nine and a half days' suppression of urine, but on looking into the history, fifty-four ounces of urine were passed from the so-called fourth, fifth, and sixth days of suppression, and six ounces of urine were found in the bladder *post-mortem*. Another case he gives of suppression for nine and a half days before death, two ounces being secreted on the fourth day, and none found in the bladder afterwards. Up to the seventh day this patient gave no evidence of any very profound disturbance of health, skin acting, appetite remaining, &c., only just at the last the characteristic symptoms of uræmic poisoning appearing.

A case of an old lady of sixty, too, is mentioned where complete suppression took place for three days, the ureters being subjected to pressure by a cancerous growth ; this pressure becoming altered, and the function restored, the patient lived to die of the cancer.

In the bulk of genuine cases of suppression of urine it appears that the symptoms for some days are trifling compared with the gravity of the accident that has occurred—the flushed face, hiccough, slight distress, and at first a desire to pass water with lumbar pain. All through the skin acts freely ; there is no urinary smell about patient, and but little loss of appetite ; often a considerable thirst ; head quite clear, and only at the last do uræmic symptoms declare themselves.

Some experiments of Hermann* showed that the pressure

* Henle and Pfeufers, *Zeitschrift*, 1862, p. 1.

exerted on the ureter by a column of mercury 60 mm. high=24 inches, caused complete arrest of the secretion of urine.

This is not reassuring when one reflects how often by disturbing the pelvic anatomy, in dragging up a short, thick pedicle for the clamp, very considerable pressure must be exerted on one or both ureters. I feel that the scope of this paper would be exceeded were I to attempt an analysis of all the published cases of suppression of urine. So interesting as this part of the question is, I must leave it, and conclude by asking the Fellows to give me the practical information I am seeking in bringing this case before the Society as to how I or others may, if I or they meet with similar cases, avoid encountering the same difficulties that I have met with.

Report on the Specimen of Abdominal Tumour.—Received Feb., 14, 1890, by Mr. BLAND SUTTON.

The parts consist of the uterus and upper two inches of the vagina, surrounded by a large solid tumour, the whole weighing, after the blood and large quantities of serum had drained away, nine pounds. The uterine walls, especially at the fundus, are thicker than usual (one-and-a-half to two inches).

On section the tumour has a well-defined and firm peripheral portion, not sufficiently distinct to constitute a capsule. This part is made up mainly of unstriped muscle-fibre. The central portion of the tumour is soft and succulent like an orange, the tissues being engorged with a sticky, almost mucilaginous, fluid. There is no line of demarcation between the tumour and the tissues of the cervix uteri and adjacent parts of the vagina. The soft parts of the tumour consist of typical myxomatous tissue.

These tumours arise in the connective tissue normally existing between the layers of the broad ligaments of the uterus. In their early stages they consist mainly of unstriped muscle tissue, but after attaining the size of a small melon, the central parts undergo myxomatous change, and in some

specimens fluid-containing cavities, sometimes of large size, arise in them.

Mr. Alban Doran is of opinion that these tumours arise in the ligament of the ovary, but in those I have examined the ovarian ligament was unconnected with the tumour. An excellent specimen of this nature is described in the Gynæcological Society's Journal, 1889. I reported upon the specimen and added a drawing to illustrate the condition.

The present specimen is the eighth example which I have had the opportunity of examining.

J. BLAND SUTTON.

Dr. FANCOURT BARNES said he was present at the operation, and the only thing that surprised him was that the tumour should have been removed without at the same time taking away part of the bladder, the ureters, or, indeed, any of the organs adjacent to the uterus. It was a remarkably large tumour and had no pedicle, and so far as he was able to see, watching the operation closely, it was impossible to determine what was tumour and what uterus or bladder. He himself always made a rule to leave a large margin for the pedicle, and Dr. Fenton had certainly carried out the principle in that case. The tumour, however, was so large and round that even when he had done this, and applied the *serre-nœud* around what he might consider to be in the place of the pedicle, still there was an enormous mass of tissue left behind. This did not shrink up as the pedicle usually did, and it had to be tied in the best way they could. Before he did this, however, he enucleated down, so as to leave a pedicle. This was very difficult to do, as the capsule could not be brought together to form a capsule pedicle. As regards the condition of the kidneys, he thought the case was one which would probably be quoted on account of the complete absence of suffering and other indication of the serious condition in which the patient was in. He thought that Dr. Fenton had conferred a great benefit upon the *technique* of hysterectomy by relating this case. Seeing that it was admitted on all hands that hysterectomy was likely to come more and

more into the category of classic operations, cases of this kind were of extreme service, as laying down important landmarks.

Dr. F. A. PURCELL observed that the method described by Dr. Bantock at their last meeting seemed peculiarly adapted to Dr. Fenton's case. He alluded to the application of an elastic ligature over the base of the tumour before attempting to enucleate. Had that been done the hæmorrhage would have been restrained. Then the capsule might have been divided and stripped down and the *serre-næud* applied around the base of the tumour, which would have been easy, and the tumour then lifted up out of its cavity. The walls of the tumour would thus form the pedicle, and the application of the *serre-næud* within the capsule would have had the effect to further restrain the hæmorrhage. Then the stump could be brought up and fixed to the parietes, after which the elastic ligature should be removed. He thought that if this procedure had been adopted the ureters would undoubtedly have escaped inclusion.

Dr. BANTOCK said the case brought before them two questions, viz., the first relating to the urinary secretion, and the interference with it. He pointed out that the symptoms arising from the retention of urine were very different from those due to suppression, and his experience had taught him that suppression of urine led far more rapidly to a fatal result than retention. In Dr. Fenton's case the urine seemed to have been retained and not suppressed, and it recalled to his mind a case of his own in which he had removed a very large soft fibroid tumour, which involved the removal of the whole of the uterus. He was young in experience in those days, and he would not now commit the same error. After enucleating the tumour, and finding that there was a little bleeding in the direction of the broad ligament, instead of picking up the bleeding vessels he put a ligature upon each broad ligament, as he thought, thinking that he was quite far enough away from the ureters. Unfortunately, however, he included the ureter on both sides, and the patient died five or six days

later with symptoms which he was inclined to attribute to retention of urine. The other question raised by Dr. Fenton's case was as to the operation itself, and Dr. Purcell had in some measure forestalled him. He admitted that it was difficult for anyone who had not seen the operation to criticise or to form an opinion; but his experience of similar cases led him to think that if the elastic ligature had first been applied around the base of the tumour the hæmorrhage which usually comes from the envelope would have been controlled. This would have got rid of the most important source of hæmorrhage, and Dr. Fenton might then have divided the capsule and stripped it—forcibly if needs be—from the tumour by the use of scissors. He might then have got down to the base of the tumour and enucleated it, keeping as close to the envelope as possible. In that way he would have escaped the ureters. Having enucleated the whole or the greater part of the tumour, leaving perhaps a small portion of the cervix, he could have gently loosened the elastic ligature, catching up any bleeding points that presented themselves, and so have avoided the injury inflicted upon the ureters. He would suggest that in any similar case that the elastic ligature should be used as a controlling agent. He thought that would save the operator from the difficulties which he met with in this case. It would save him from taking part of the vagina away. As Dr. Fenton had read his paper, he was quite prepared for the damage inflicted upon the ureters when he told us that he had removed a considerable portion of the vagina; for unless it was the posterior *cul-de-sac* he must of necessity have injured the bladder or the ureters, or both. It was a very instructive case, and they were all much indebted to Dr. Fenton for bringing it before them.

DR. MACNAUGHTON JONES suggested that the risk of injuring the ureters might have been averted if the difficulty were recognised beforehand by making a button-hole in the bladder, and, as in catheterisation of the ureters, introducing two steel sounds which would have served as a guide to their position. He said he did not gather from the paper that the case was one of retention and not of suppression of urine.

Dr. BANTOCK said it was a case of retention of the urine in the pelvis or the kidney, and as soon as the pressure was taken off then the urine came away.

Dr. MACNAUGHTON JONES said he was unable to conceive of a degree of distension of the kidney which would allow of such an accumulation,—unless indeed it was a case of hydro-nephrosis. He had seen an analogous condition in labour cases prolonged, and had passed a catheter several times under the impression that there was retention, but no urine had escaped. Such a condition usually persisted for a short time, and then the flow returned in abundance. There was nothing very extraordinary in that. They were cases of temporary suppression, not retention. The term retention he only used as applied to retention of the urine in the bladder. In suppression the secretion did not take place, and this was, he believed, what had happened in that case. He had seen women after labour secrete little urine for days, with apparently very little inconvenience. He thought the system tended for a time to adapt itself to the altered condition.

Dr. BEDFORD FENWICK said the question as to whether it was suppression or detention was an important point. He himself was convinced that it was not a case of suppression of urine, but simply of retention. He said that most of them must have seen cases in which no urine was apparently secreted—at least there was none in the bladder—and yet after a time a rush had taken place. He thought this could be proved from the paper. It was stated that for five days no urine had been passed, yet there had been no discomfort, no perspiration, no marked diarrhoea, without which there could not have failed to be some symptoms of uræmic poisoning. Then, too, when the urine was passed it came away in large quantities. The pelvis of the kidney was capable of holding a large quantity if pressure were put upon it, and so would the ureters. The muscular stricture of the ureters was enormously thickened, although the disease only dated from a month before. Such an amount of thickening could not

have taken place unless the ureters, &c., had not been distended with urine. Then the right kidney was absolutely disorganised, and that must have been the result of pressure, since there was no trace of albumen in the urine. The left kidney would probably be found to be disorganised also. The right ureter evidently felt the whole force of the retention. He mentioned a case of his own, of a patient with rapidly growing fibroid, which had exercised pressure on the kidneys, yet there had been no sign of uræmia. *Post-mortem*, however, she was found to have completely cystic kidneys. Both ureters in this case had undergone the same thickening.

Dr. MACNAUGHTON JONES asked whether Dr. Fenwick really believed that this degree of thickening could be caused in five or six days?

Dr. FENWICK, said that the retention only lasted five days, but the patient lived some time longer, and the process would have continued during that time.

Mr. BOWREMAN JESSETT referred to a case of his, of a woman who applied with a tumour in the left side, due, as it turned out, to hydro-nephrosis, with total suppression of urine for five days. The right kidney had been removed twelve months previously, yet she had no uræmic symptoms. He cut down upon the kidney in the left loin, and let out about three-quarters of a pint of pus and urine; no stone could be found, during the same night urine was secreted in large quantities. There was no doubt complete suppression in that case had been caused from pressure of urine in the pelvis of the kidney. He thought that very likely this was the condition of things in Dr. Fenton's case. The abdomen in Dr. Fenton's case had been carefully explored, and if the ureters and pelvis had been distended a tumour must have been detected. In reference to Dr. Jones' suggestion of passing a steel pack up the ureters from the bladder, he said such a proceeding would be absolutely impossible with so large a tumour filling the abdomen. With respect to the remarks of Drs. Purcell and Bantock, he pointed out that the tumour was soft and friable, and would not have

borne the *serre-nœud* in the manner they discussed, hence the procedure suggested by them would be altogether inapplicable in Dr. Fenton's case.

Dr. CAMPBELL POPE, speaking on the subject of retention *versus* suppression, mentioned the case of an infant who did not pass any urine for days after birth, nor could any be drawn off. *Post-mortem*, the orifices of the ureters were found to be impervious, and the ureters themselves contained two or three ounces of urine, and were enlarged to the size of two or three fingers. This was a case that might have been taken for suppression, though in reality one of retention.

Dr. BANTOCK observed that in all cases of retention there must be a certain amount of suppression as soon as a certain pressure in the kidneys had been reached. The effects of retention varied of course according to the situation of the obstacle. If the obstruction were at the orifice of the urethra then the bladder would be dilated; if the retentive force were applied to the ureter this could distend only a very little, and a point would soon be reached at which no urine could be secreted. Inasmuch, however, as the retention was primary, such cases were, properly speaking, cases of retention.

Mr. O'CALLAGHAN said that after all the question as to whether it was a case of suppression or of retention was a matter of very little importance. He thought it was probably one of suppression, but possibly there was a little of both. He did not think that it was possible to criticise such a case unless one was present at the operation. Those who had had anything to do with these myxomatous tumours knew that they were not easy things to deal with, or to seize by means of a *serre-nœud* or an elastic ligature, or indeed with any other instrument. In removal of one such case he had used a rope clamp, yet he cut into the top of the bladder. These cases could not be spoken of as if they were ordinary soft fibroids; and their mortality was very high, consequent on their involving in their growth all tissues they become in any way attached to and being inseparable from them. He thought it was a lesson to general surgeons who

attempted this *special* work, in that they could not cut into an abdomen and remove tumours *ad libitum*, seeing that even with special knowledge and experience in gynæcology they are liable to meet with disaster.

Dr. FENTON, in reply, thanked the Fellows for the criticism with which they had gratified him in answer to his request. He pointed out that it was impossible for anyone who was not present at the operation to fully appreciate the difficulties they had to contend with. He would have been only too happy to have availed himself of the method suggested by Drs. Bantock and Purcell had it been at all applicable, but he had pointed out that the tumour consisted only of delicate meshes containing a substance resembling office gum. He asked how they were to get a wire round such stuff as that. It would have cut through to a certainty. He had not the least trouble with the hæmorrhage, consequently there was no occasion for the elastic ligature. As for making a pedicle out of the substance of the tumour, that was impossible for the reasons which he had stated, and the same remark applied to the capsule. He adhered to his view that it was a case of suppression of urine. The pelvis of the kidney, which Dr. Fenwick suggested had held 120 ounces of urine, would scarcely admit the tops of two fingers, and the thickened ureter was twice the size of the other but was not distended. The patient had been examined again and again, and had there been any tumour due to retention it would infallibly have been detected. His view was borne out by all the cases of true suppression of urine to which he had been enabled to refer. In suppression the discomfort was often curiously absent, whereas in retention the distress was immediate and extreme. Then, too, in retention there was shivering, dry tongue, and the urine is offensive when released, being ammoniacal and containing pus and blood. And yet this was not so in this case. As to the suggestion to attempt to find the ureters in a case in which the anatomical disturbance was such as to render it impos-

sible to say what was what, it could not be thought of. He had brought the case forward because he thought the difficulties he had met with might also present themselves to others. Mr. Bland Sutton had only met with eight cases of myxomatous tumours out of the large number which he was called upon to examine, and it was something very different from the ordinary pelvic tumours.

Uterine Tumours.

Mr. O'CALLAGHAN showed several specimens of uterine tumours. The first was one with a large œdematous pedicle attached to the right portion of the uterus, and in that case he simply split the peritoneum and enucleated the tumour, which was an ordinary fibroid. He had at first hoped, instead of ligaturing the pedicle, to tie the vessels in the broad ligament; ultimately, however, he had to ligature it as a whole and pass in a drain. The patient made a good recovery. A second large tumour weighed twenty-one pounds. He split the peritoneum in the same way. She had been suffering terrible agony for ten years, and really came to him to be admitted into an incurable hospital. In all these cases, before attempting to open the broad ligament he applied Mr. Tait's rope clamp, then shelled them out. In this case (with the greatest care) a portion of the wall of the rectum was nipped, and a fæcal fistula resulted.

He also showed several other fibroids removed from a woman aged thirty-five, who had a great deal of pain and occasional severe symptoms of obstruction of the bowels. In this case, also, before enucleating, he applied the rope clamp. Four of the growths were easily enucleated, but he found himself unable to strip the peritoneum off the fifth. On removing the clamp on the right side, hæmorrhage started from the right cornua so severe that he had to act promptly. Finding he could compress the bleeding vessel in the right broad ligament, he tied it, and the hæmorrhage

ceased, except from the pedicle; so he turned the broad ligament in on itself and sewed it together. He, however, made a pedicle for the other side. He now had to decide whether it would be better to drop back the pedicle or treat it extra-peritoneally. After consideration he returned the pedicle into the abdomen, and the patient did very well, although for two weeks she gave him a good deal of anxiety, owing to suppuration of the pedicle. The lesson presented to him by this case was that no rules or instructions—no matter how complete—can be adhered to in such cases, and that only during operation can each man decide for himself what he is to do and whether he will treat the pedicle intra- or extra-peritoneally.

Dr. HEYWOOD SMITH observed that the question of the intra-peritoneal treatment of the pedicle was most interesting, and in spite of what had been said he thought they would ultimately come to it, and additional safeguards would, doubtless, be provided. As there was no hæmorrhage and as the orifice was closed that might have bled, he asked why Mr. O'Callaghan had used the drainage tube at all? Could one ever be so sure of having no hæmorrhage as to render it safe to dispense with the use of the drainage tube? That was a point of great interest and importance.

Dr. BANTOCK said the cases were very interesting, and reflected great credit on the skill of the operator. It would be very absurd to attempt to lay down rules hard and fast as to the treatment of the pedicle in hysterectomy, and he had always endeavoured to avoid doing anything of the kind. On the contrary, he had repeatedly pointed out that each case had to be judged upon its merits. He had exhibited tumours without a pedicle which he had enucleated from the broad ligament. In such cases they must be treated in the same way as an ordinary cyst of the broad ligament. Any rule to the effect that all pedicles ought to be treated by the intra-peritoneal method would be a mistake, and might be the means of leading others into disaster. The last case pointed to one of the dangers arising from the intra-peritoneal

treatment of the pedicle, for his patient must have died had a drainage tube not been inserted, showing that the intra-peritoneal treatment of the pedicle without a drainage tube was a mistake. When treated extra-peritoneally no drainage tube was required unless there happened to have been adhesions; but that, of course, had nothing to do with the pedicle. Therefore in speaking of the success of the intra-peritoneal treatment of the pedicle, they must bear in mind that the drainage had more to do with the success of the treatment than the pedicle. The experience with the large round tumour showed how dangerous it was to enucleate an intramural fibroid, for it was quite impossible to pick up any bleeding vessels. The whole surface oozes like a sponge, and the only way was to close the raw surface, or to encircle the whole mass. Some years ago he had removed a tumour of very large size by enucleation. He slit open the capsule and turned it out, and it was his intention to treat it in the way suggested by Martin, of Berlin, viz., to stitch the raw surfaces together and drop it into the cavity, but he saw at once that such a course would be an invitation to disaster, for, as he had said, the whole surface was oozing. Seeing the difficulty, he at once transfixed the base, put on a *serre-nœud*, and brought it out, and the last case of Mr. O'Callaghan bore out the views he had put forward. Successful as the intra-peritoneal method of treatment might be in a few cases it was in reality a dangerous procedure, and was not safe unless the drainage tube was used.

Dr. BANTOCK demonstrated his procedure. First, he applied a ligature outside the tumour, covered as it was by peritoneum. Then he opened the peritoneal investment and applied the *serre-nœud*, at the base of the tumour—this time OUTSIDE the peritoneum. Having removed the tumour there only remained to stitch together the layer of peritoneum, covering what was the base of the tumour, *i.e.* the broad ligament, with that lining the parietes.

Dr. GUBB asked how Mr. O'Callaghan knew that he had nipped the rectum? He observed that the *fæcal fistulæ* not

unfrequently occurred without there being any reason for suspecting such an accident to have taken place.

Mr. O'CALLAGHAN, in reply, said that a piece of the mucous membrane of the rectum was taken away with the tumour. He explained that he had to open from one side of the uterus to the other, and he had turned in the broad ligament on one side and made a pedicle on the other. That was why he used the drainage tube. Had he treated the pedicle by the extra-peritoneal method he would have been obliged to perform hysterectomy. In women between thirty-five and forty, where there had been much hæmorrhage during operation, or where they had opened uterine tissue, he thought it would be bad surgery to close the wound without putting in a drainage tube. If the pedicle showed any tendency to suppurate, or if there was bleeding, the drainage tube would give one warning. In the absence of either of these conditions it did no harm, and it could be removed in from twenty-four to forty-eight hours. He had always found the drainage tube of the greatest advantage; it would only be in simple abdominal sections, such as ovariectomy, that he would dispense with its use.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, APRIL 23, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT : 24 Fellows, 3 Visitors.

Mr. BOWREMAN JESSETT showed a portable operating table suitable for surgical or gynæcological work, very light, strong and portable. He also showed a tumour which he had removed from a woman, aged fifty-four, to illustrate the advantages attending the method suggested by Dr. Bantock, this consisting in applying an elastic ligature round the base of the



tumour, the capsule of which is then opened and peeled off down to the base, where the *serre-nœud* is put on. The operation had only been performed on the previous day, and he felt bound to say that, were it not for having adopted this method, he did not know how he would have managed, for there would have been a tremendous strain on the pedicle which would have caused the patient much pain, and possibly a good deal of risk. Scarcely any blood was lost, and the

operation was done with comparative ease. The capsule was stitched round the abdominal parietes. The tumour appeared to be a soft, rapidly-growing fibroid, and seemed to



have been developed inside the uterus, so that its removal involved that of the entire organ. He had first seen the patient two months ago, and since that time the tumour had



become nearly twice as large as it was in the first instance. At the time of operating he thought he had to deal with a parovarian cyst, apparent fluctuation being present, and he thought he could feel the uterus in front.

Dr. PURCELL, who said he was present at the operation, confirmed what Mr. Jessett had said with reference to the advantages attending the method proposed and practised by Dr. Bantock. He pointed out that the treatment of the stump made the pedicle extra-peritoneal. The peritoneum was closed around the pedicle on each side with the edges of the parietes, so that on each side the peritoneum was thoroughly occluded to the entrance of matter from the outside. He said that it was well that emphasis should be made in respect of this method, because at a recent discussion on the subject of abdominal surgery at another Society, not a single allusion was made to Dr. Bantock's very useful procedure in the treatment of the stump after supra-vaginal hysterectomy.

Dr. R. T. SMITH asked whether there had been any metrorrhagia?

Dr. FENTON, in reference to the table, pointed out that the practice of suspending the patients' thighs, &c., to their necks was often a source of danger to the process of respiration; this table did away with this risk, as the straps which kept up the legs were attached to the table itself.

Dr. BANTOCK congratulated Mr. Jessett on having designed such a convenient table. He pointed out that the strap to keep up the legs ought to pass under one shoulder and over the other—an arrangement which did away with any inconvenience. With reference to the specimen shown by Mr. Jessett, he said he was glad if his suggestions had proved of service to his fellow operators in aiding them to overcome some of the difficulties of supra-vaginal hysterectomy. These difficulties were greater than one might be led to suppose from the remarks which had fallen from Mr. Treves at another Society, to the effect that it was only necessary to tie the uterine arteries, &c., making it all a matter of the utmost simplicity. As a matter of fact it was one of the most difficult operations one could undertake. In a case he had operated upon a week before he had removed seventeen small fibroids from the uterus before he could get the pedicle. By this means he

had managed it satisfactorily, and the patient was doing very well.

Mr. JESSETT, in reply, said there was no menorrhagia. She was past the menopause by about eighteen months, but during the last month or two she had lost considerably.

Dr. HEBERT showed a single placenta which he had met with in a case of twins. There were two umbilical cords, each attached to the edges of the placenta. It was probably formed from two ova, but the parts were so much blended together as to look like one, no line of demarcation being discernible.

He also showed a diffusing electrode which he had designed, and intended to replace the electrode of potter's clay. It was made of metallic cloth in two layers, separated by an insulating cushion of velvet. He pointed out that by connecting one of the poles of a battery with the centre of the surface of the electrode opposite to that which came in contact with the body, when the latter is included in a galvanic circuit, the current was thereby diffused over an area of the size of the electrode, before reaching the surface of the body. In this way it was possible to make use of strong currents without giving rise to pain. He also pointed out the necessity of effecting the contact of the pole of the battery with the electrode as near the centre of the latter as possible, as, when the point of contact was nearer one edge than the other, that part of the body nearest to the point of contact received most of the current which might then produce pain. However, in using very strong currents, or when the metallic cloth used in making the electrode is not of sufficient fineness, it is advisable to interpose a damp cloth or chamois skin between the body of the patient and the electrode.

Dr. BARNES asked whether the vessels in the placenta communicated—that is, whether it was really one placenta, or whether two placentas had grown together in consequence of pressure? This, he pointed out, could be ascertained by injecting them. He would not be willing to concede that it was in reality one placenta, unless this point were elucidated.

Mr. JESSETT asked whether Mr. Hebert had used the electrode in electrolysis, or uterine fibroids ?

Dr. HEBERT, in reply, said he had only used the electrode with the Faradic current. With regard to the placenta he believed, with Dr. Barnes, that it was double in the first instance. The two sacs were quite distinct. It was the first time he had met with the placentas grown together in this way.

Dr. BARNES asked whether the labour was at term, and whether the infants had survived ?

Dr. HEBERT said labour was not at term, but both the children were alive. The pregnancy was at about the seventh month.

Dr. HEYWOOD SMITH suggested that the current would be more equally distributed if the wire of which the cloth was made was finer.

Dr. HEBERT said that was certainly the case, but the cloth was the finest he had been able to procure.

Gynæcology in General Practice. By JOHN A. LYCETT, M.D.,
Surg., Wolverhampton and District Hospital for Women.

MR. PRESIDENT AND GENTLEMEN,—A hope having been expressed that those Fellows who are engaged in general practice would become more frequent contributors to this Society, I am induced to address you upon some topics, firstly as to the position gynæcology holds in the curriculum of study for the profession, in relation to the importance of this branch in general practice. This must in the future demand generally more attention in view of the knowledge which has been acquired through the successful work of a few who have made it a special study. Hence the practitioner, if he is effectually and conscientiously to discharge his duty to the public, must be better prepared than has hitherto been the case, for under the past and probably the present system of education at the majority of the schools, this important branch

receives inadequate attention, both by the responsible authorities and the students, the latter naturally measuring its importance by the conduct of those into whose keeping their professional training is entrusted ; consequently the majority of students who present themselves at the examining boards, and obtain a diploma, have but a very hazy practical knowledge of gynæcology and obstetrics, many not having performed the simplest operation, the information obtained being mainly theoretical, chiefly through literature, so very defective is the practical instruction which the average student receives. This is a great injustice both to the public and the students—to the former, since it is among the poorer classes that his information, unaided, has in after life to be obtained,—to the latter, since it places him in a false position, obliging him to undertake that for which he feels he has not been properly prepared. Reform is much needed with regard to the nature and extent of the instruction given in this department, for it is a cruel wrong to launch a student into the world upon his own resources so ill-prepared to carry on what will prove to be a very large proportion of the work he has to undertake in general practice. Some, perceiving this defect, seek to remedy their shortcomings by getting the required information at a special hospital, now established in most towns of any magnitude, and where by far the greater success is attained, be the causes what they may, as evidenced by the statistics respectively of general and special hospitals. A few also, who are less fortunate, succeed in obtaining some insight, though to a disadvantage, by holding for a temporary period a junior position in the gynæcological department at a general hospital ; but unless the professional training of a student has very much altered during recent years, there exists generally no proper system by which he will have the opportunity of gaining the information so essential in general practice—gynæcology and obstetrics requiring as much, if not more, attention than pertains to any other branch of the profession.

Partly through the indifference of the authorities at the general hospitals in England, special institutions have become

a necessity, and now they are to be found in many towns, and ought, in my opinion, to become schools for the purpose of imparting that practical information which commonly can only be imperfectly obtained at a general hospital. Of course, in admitting students, certain restrictions would have to be enforced, and proper precautions exercised to guard against possible harm to the patients. During twelve months I was house-surgeon at the Middlesex I remember only two cases in which abdominal section was performed other than for hernia, and I have a recollection of several women with advanced ovarian and other tumours being sent to the hospital in Soho Square—a practice which in the interest of the sufferers was quite right, though it robbed the student of information which he ought to be able to obtain by some means. At that period pyæmia and erysipelas were rife in the surgical wards, and ovarian growths were frequently allowed to proceed, so that it was not unusual to see them attaining a considerable size before an operation was performed; and all other chronic diseases of the pelvic organs, however serious the condition of the sufferers, were not then treated by abdominal section—such was the prevailing fear.

Through the modern successful treatment by surgery of so many abdominal diseases the responsibility of the general practitioner has much increased, for with him will now more frequently rest the life or death of a patient—a responsibility which formerly was not recognised, owing to the non-realisation of the power of surgery. Now, however, it is imperative that every effort should be employed to arrive at a correct diagnosis, in order that the practitioner may early recognise those cases which ought to be submitted to abdominal section. This is a task often of considerable difficulty even to experts—how much more so, then, to the young practitioner who feels the deficiency of the practical instruction in gynæcology received while a student at a general hospital. What knowledge of gynæcology and abdominal surgery I possess had to be gained since I became legally qualified and mainly in private practice. Surely, if

the minor operation of vaccination is considered of such importance as to necessitate special instruction, for which a fee has to be paid and a certificate of proficiency at a pass examination required, how much more necessary that provision should be made for every student to attend a course of lectures, receive clinical instruction, and see the practice at a special institution for gynæcology. This could be carried out during the final period of professional study. Six months of such instruction would give him some confidence, and fortify him for future work, and be the means of enabling him to save life in many instances where it is lost, either through not being able to operate or recognise the serious nature of some affections necessitating abdominal section. Every medical man ought to receive practical instruction in the details of opening the abdomen and the after management of such cases. He ought also to provide himself with the essentials, ready whenever required, for the services of a skilled specialist in urgent cases cannot generally be obtained. Mr. Lawson Tait said, in one of his post-graduate lectures delivered in Birmingham on "Abdominal Surgery," "that every practitioner should be thoroughly acquainted with the details of opening the abdomen, upon close attention to which, even under the disadvantage of surrounding unfavourable circumstances and an absence of experience, a fair success can be obtained." Cases in which such an operation would be justifiable by the general practitioner, in the absence of a more skilled operator, are constantly occurring, such as some condition associated with peritonitis, ectopic gestation, with rupture of the sac into the peritoneal cavity, &c.; and if Porro's operation or some modification, such as the procedure advocated by Mr. Tait in an address on the "Surgical Aspect of Impacted Labour," delivered to the Southampton Medical Society and published in the *British Medical Journal* for March 22nd, is to become an established operation, to save the life of the child under the respective conditions where at present it is sacrificed, the general practitioner ought, in justice to himself and the woman, to be so instructed that

the operation shall in his hitherto more or less inexperienced hands be attended with no greater maternal mortality than is the case when craniotomy is resorted to. Moreover, there must be no ambiguity about the teaching, which should be such as to enable him to determine readily and clearly the proper cases for such an operation; therefore it should be distinctly laid down what are the conditions to warrant the attempt to deliver by one of the alternative measures—either forceps or version. In very pronounced cases of pelvic deformity or other obstruction no question would arise, and the woman would have a better chance of recovery after amputation of the uterus, since she is more likely to be safeguarded against traumatism due to attempts to deliver *per vias naturales*. These, however, will form but a very small proportion, compared with the far more numerous cases of less marked degrees of dystocia, which arise from causes either on the part of the child or maternal passages, and as most of such cases, so far as the mother is concerned, can be overcome by judicious management without great danger to her, it behoves the practitioner to make himself thoroughly assured as to the necessity before resorting to a measure that would, if recovering, of course ever render child-bearing impossible. Once only in the course of my practice have I had to resort to craniotomy, and have delivered by forceps over eighty times, being 5 per cent. of the cases, not a large number requiring instrumental delivery, many being for disproportion at the superior strait, without the loss of a woman; but the infant mortality I find to have been heavy, as also where version was practised, so that it is in my experience evidently very exceptional for great danger to arise to the woman from mechanical causes; puerperal mortality being mainly due to sepsis of some nature, arising often where from the associated circumstances and character of the labour such after-mischief would be least expected, so subtle is generally the cause.

Unless the employment of the forceps at the brim of the pelvis is wholly condemned in all cases of disproportion, it

will inevitably occur that tentative or more decided efforts to deliver will be made in the lesser degrees of disproportion, before resorting to the recently proposed alternative for craniotomy. It is here that the accoucheur will feel the responsibility, and I venture to say that he will rarely be placed under a more trying circumstance than when he has to decide the difficult task whether to attempt or continue the endeavour to deliver *per vias naturales*, in preference to resorting to the proposed alternative—amputation of the uterus—in the hope of saving both lives. My experience of the present orthodox methods of effecting delivery where there is disproportion shows that the child undoubtedly runs a great risk of life, but the cases must be very exceptional where the disproportion is such as to place the life of the woman in jeopardy when she has the advantage of skilled assistance, as only on one occasion did serious after-trouble arise. Even when, as a consequence of disproportion, the first child could not be saved by one of the conservative methods, either forceps or version, yet having this history as a guide, the large majority of such women, by escaping the risk of such an operation under adverse circumstances and remaining unmutated, would probably through management give birth to subsequent living children under more favourable conditions of parturition, such as the stage of gestation as bearing upon the size of the head and degree of ossification of the cranial bones, the nature of the presentation, and, I will also add, the situation of the placenta, as amputation of the uterus is suggested as a treatment in some cases of placenta prævia—which is indeed no irrational idea considering the very great mortality both to the mother and child, especially the latter, attending this accident, as shown by statistics; which, however, is open to such an explanation that would materially influence the question or advisability of performing such an operation; as, I believe, to rely upon statistics alone as a guide or indication for operation would be fallacious, since the mortality is mainly due to neglect. For while I have had no maternal death following instrumental delivery, I have on several occa-

sions been called to women who were either dead or dying from the consequent hæmorrhage. It must also be borne in mind that in placenta prævia, especially if central—being the cases, I presume, more particularly to be selected for operation—maturity is not usually attained before serious hæmorrhage arises, and in proportion to the amount of such hæmorrhage and the normal period of gestation being curtailed, would the vitality of the child be enfeebled. Moreover, I have not known the accident recur in a subsequent pregnancy, even when attention has not been given to insure that the uterus returns to a normal healthy state.

The field for gynæcological work is extending, and is now great compared to what appears to have existed a generation ago. This is not wholly due to previous non-recognition of disease or growth of population, but, *pari passu*, with undoubted physical deterioration and the consequent increase in constitutional affections. Civilization has, through fostering care, indirectly rendered the work so great and important as to necessitate making gynæcology a special department; for many now arrive at maturity who would have early succumbed from enfeebled vitality through some constitutional cause, the generative organs in women during the reproductive period being peculiarly prone to some chronic disease, when general vitality is impaired. I recently observed the statement that ovarian tumours were more frequently noticed in those having a family history of phthisis, which, like cancer, points to some constitutional origin for their growth. The laws of nature are inexorable, and it is in seeking to mitigate much of the suffering which arises from her dictates that gynæcology is becoming a science and art. Diagnosis and treatment, however, in respect to some affections, are capable of being placed upon a better understanding, as sometimes such apparently opposite views are entertained by persons equally well informed as to bewilder a tyro in the profession, the want of unison being often due to not grasping the whole bearings of a subject; associated conditions not being taken sufficiently into account to make intelligible a treatment

that apparently is irrational or even absurd. Take in illustration displacement of the uterus, with the possible varying morbid conditions of that organ and the associated changes in the surrounding structures, traumatic or otherwise, where cause is constantly bearing an inverse connection with effect, and an undue importance attached to what may be considered of a secondary, if not insignificant, nature. In a given case, one, with a mechanical inclination, may introduce a pessary or even an intra-uterine stem. Another performs elytrorrhaphy, perineorrhaphy, trachelorrhaphy, or some other operation which may be considered indicated. Others with less taste for surgery—to be found in practitioners of the older type—but possessing a sound knowledge of medicine, may rely upon local medication, combined either with or without general hygienic and therapeutic measures; and yet with such diversity in practice, good results will be obtained in the hands of those who know what they are doing and can fully appreciate the associated conditions which influence the mode of treatment, so that what in the judgment of the tyro appears only chaos would in the eyes of the better informed be rational and correct. Much of this uncertainty is due to an apparent want of that uniformity of phenomena which is so remarkable in some branches of physical science—the diversity in the practice of medicine ever affording a theme both for the philosopher and the humorist. A wide range of professional knowledge is expected at the present day from the all-round practitioner, which necessarily places him at a disadvantage with the requirements of the age, as, owing to advanced knowledge, the respective departments have inevitably to be made the subjects of special study if an approach to exactness is to be obtained. Hence specialism is much on the increase, and when confined to proper subjects is a credit to the profession and a boon to the public, but becomes degrading when, under the cloak of the term, an endeavour is made by a person of mistaken enterprise to impress upon the public the importance of making a special study of some untenable subject, such as, I believe Sir Andrew Clarke mentioned, affections of the great toe.

The mind of man, though capacious, cannot embrace the present collective information made known by individual work. To such a high degree is specialism carried that even gynæcology is being subdivided broadly into medicinal and surgical. The latter again promises a further division, where circumstances will admit, for the purpose of attaining greater perfection, as an operation which entails opening the abdomen is now considered worthy of a distinct care and attention. This is owing partly to the importance of observing certain rules and precautions which relatively influence the degree of success, and partly to the intuitive knowledge which practice gives to one who devotes attention to a subject. Such cannot be imparted by signs, writing, or in words.

It is, however, in therapeutic treatment that the good all-round practitioner shines to advantage when compared with the operating specialist, and his general professional knowledge, collectively, if weighed in the balance, would be on a par with, or even exceed, that of the specialist who confines himself to a particular sphere of work; but in no special branch does a good knowledge of medicine and surgery evince its advantage more than in the practice of gynæcology, consequently compared with other specialities the general practitioner usually attains a greater proficiency, and for the same reason those who have been so successful in universally establishing their renown in this department have, in the majority of instances, received their early training in general practice. Mistakes in diagnosis by general practitioners oftentimes arise from the attending difficulties in not being able to utilize sufficiently the indicated various means which science has placed at our disposal. Our resources are by no means complete, being too often inadequate to avoid error, so that a mistake may be due, not so much to the individual observer, but to the standard of general knowledge pertaining to the subject, which in the future may be so far overcome as to cause the professionals of a century hence to view our present position with as much pity as we now are inclined to bestow upon our progenitors at the open-

ing of this century. The isolation of a general practitioner, especially in the country, places him at a further disadvantage, shown for instance when an anæsthetic is necessary, as such should never be administered in private practice without the presence of another practitioner; and yet under these drawbacks, and with the lesser practical knowledge which constant attention has given the specialist, he is expected by his patient, after perhaps a casual and imperfect examination, and for a small fee, or not any, to be able to state all about the nature of a given affection from which she may be suffering.

With the general practitioner it should ever be an important object to avoid error in diagnosis; great caution must therefore be exercised in giving an opinion. Non-professional persons do not understand the possible difficulties which may be presented; but would be readily liable to form an unfair conclusion, to the detriment of the regular adviser, if his judgment was subsequently found to be incorrect. The general practitioner compared with a specialist, is, in some instances, placed at another disadvantage, since he commonly sees disease in the early stage, at a period when there may exist considerable difficulty and doubt, whereas the specialist usually is not consulted until a given morbid condition is more developed, having, too, the benefit of knowing the practitioner's previous experience of the case.

With the regular adviser much responsibility rests now that surgery has taken such a standpoint in gynæcology, as it is important that all affections, especially some, should be early diagnosed, if operative treatment, according to modern principles, is to afford a better chance of saving life or curing the woman. Take, as an example, the early stage of malignant disease of the uterus, where there may exist no positive physical sign (on casual examination) pointing to the presence of so serious a malady, and the only symptom, that probably for which advice is sought,—an occasional metrorrhagia, occurring at a period of life to cause the woman to suppose it to be due to the change, or some other possible non-malignant condition. Here, upon an imperfect basis to arrive at

a conclusion, how guarded we should be in giving expression to what may be construed by the woman as a definite answer. From my knowledge, I believe malignant disease of the uterus is very apt to be overlooked and remain unrecognised until a somewhat advanced stage, for I hear of more censures, whether just or unjust, against medical men with respect to alleged mistakes, than probably in any other affection in gynæcology ; therefore care is required to not accept as a fact that which is drawn from conjecture, or a chance association with another apparently similar morbid condition. In some cases of doubt the microscope enables us to determine heterogeneous from homogeneous structures.

The longer we are in practice and the more so-called experience we gain, the more is perceived the advisability of caution and doubting our judgment, and the more we become aware of the difficulty in applying to new cases the knowledge which we have acquired from observation. As the sources of uncertainty, which frequently present themselves, are sometimes so great that those who have had the most extensive opportunities of observation are the first to acknowledge that our pretended experience must, in general, sink into analogy, and even our analogy too often into conjecture. Not long since a distinguished gynæcologist, after years of constant practice, confessed that in about a fourth of the cases he was either wrong or failed to recognise the true character of a tumour before opening the abdomen ; about 10 per cent. of these tumours in women proving to be malignant, and 90 per cent. in men—abdominal tumours being far more common in women. This acknowledgment on the part of a distinguished specialist proves, with our inadequate resources, the difficulty which often attends the investigation of abdominal diseases.

The general practitioner has to make an examination, and often perform many minor operations without professional, or indeed any, assistance, so that he has to exercise his ingenuity to make up for the absence of such help ; hence he has to employ means which would not be required in an institution

where appliances and ample assistance are at hand. Necessity is said to be the mother of invention, and I have long made myself independent of the fickle character of natural light, the duck-bill speculum, and some other appliances necessitating the help of another person. A portion of a general practitioner's work in gynæcology does not pass beyond making a diagnosis, since many cases have to be passed over to the specialist for operation. The regular adviser has one advantage over the specialist in possessing a better knowledge of the family and past history of a patient, which often form important elements in diagnosis, and he is frequently aware of some circumstance having a powerful bearing in the causation of disease, which, except occasionally confiding with the specialist in the interest of a sufferer, never passes beyond his knowledge.

The serious results which the poison of gonorrhœa sometimes induces is well known. I remember a married woman, in whom at an operation an abscess of the ovary was found. About three years subsequently I treated her husband for gonorrhœa, when he confessed to a former attack not long before the illness of his wife which eventually necessitated the operation. It is very seldom, however, in private practice that I see venereal disease, when so, it is generally as some sequelæ, either directly traceable, or presenting symptoms more or less of a remote character in conjunction with some non-specific affection.

It was not until I began seeing out-patients at the "Women's Hospital" that I found such specific diseases were more prevalent than I anticipated, forming a considerable percentage of the ailments, requiring particular care as to the cleaning of instruments, and the exercise of caution to safeguard myself.

In considering the important position gynæcology holds in general practice I have alluded chiefly to the inadequate instruction the student receives, and the great need of affording to those who are advanced, facility for gaining a better practical knowledge of the subject; also I have enjoined my

fellow practitioners to exercise caution in expressing to a patient or her friends an opinion respecting the nature of some affections which may be open to uncertainty, the diagnosis of abdominal diseases being often very difficult, and even sometimes mere conjecture, until ascertained by means usually beyond the sphere of general practice.

In conclusion, gentlemen, I thank you for your attendance and the attention given to this contribution upon a branch of professional knowledge of increasing importance and responsibility to those in general practice.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, MAY 14, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 25 Fellows, 4 Visitors.

The following was proposed for election:—Dr. O Sullivan, Melbourne.

The PRESIDENT showed one of his buckle pessaries, which had been allowed to remain in the vagina of a lady for five years. It was originally put in for dysmenorrhœa, and the patient having gone into the country, she had applied in vain to the local men to remove it. She had accordingly removed it herself. She was single. He observed that its long-continued presence did not seem to have given rise to any irritation, but the distal extremity of it was coated with a chalky deposit, which did not extend further than half way down, and which he took to indicate that the secretions at the fundus uteri were different from those lower down. He mentioned that he had then under his care a lady who had kept one in for three years—removing and cleaning it at intervals of a year. These two cases were interesting, in view of what was said as to the danger of using intra-uterine pessaries.

Dr. BANTOCK said that his own observations led him to regard the formation of a phosphatic deposit as indicative of slight ulceration, and was commonly met with on vaginal pessaries which had set up ulceration from pressure. He supposed that the same thing had been the case in this patient. There was indeed a difference between the vaginal and the uterine secretions, but that applied to the whole of the cavities.

The PRESIDENT pointed out that he had found no trace

of ulceration, and the patient had not suffered the slightest inconvenience, which he thought was inconsistent with the idea of there having been any ulceration of the fundus.

Adjourned discussion on Dr. Lycett's paper.

Dr. R. T. SMITH suggested that the sixth point in the abstract of the speech which he had read was the most important, viz., that the general practitioner should keep his mind open, in order to avoid as far as possible error in diagnosis. The great majority of the complaints that were made against general practitioners had reference to cancer. From his own experience he thought that cases of cancer were rare which were seen before they had attained an advanced state. He had just had an illustration of this. A woman had been asked more than six months ago by her doctor to be examined, and she had refused. The fact was that patients required to be educated to apply earlier for examination. Even specialists did not meet with the cases in the earlier stages.

Dr. BARNES agreed with the previous speaker that cancer was more rare than many seemed to think. If he accepted the diagnosis reported to him, then he was in the habit of curing two or three cases of cancer a week. He pointed out that the general practitioner was often placed in an unfair position—the patient not asking his advice fairly and openly. Often, too, the patient declined to be examined. Then when matters came to a crisis, she consulted a specialist, and it seemed as if the general practitioner had overlooked the case. There were many other points in the paper which called for serious consideration, but which time would not permit of his discussing. He would, however, take that opportunity of stating that the opportunities of teaching gynaecology and obstetrics in the medical schools of this country were very inadequate, and that was one reason why special hospitals had sprung up in order that men might be enabled to study this branch of the healing art free from

hindrance. In general hospitals the gynæcological teacher was hampered by the surgeons, and the experience gained in them was limited. They might as well expect men to become anatomists without dissecting, as for a man to become a competent gynæcologist without operating. As a rule students were under this difficulty, viz., that they did not see cases carried properly through. The beds, too, in general hospitals devoted to the diseases of women were very inadequate, considering the extent to which these diseases prevailed. When a man got into practice that difficulty met him on the threshold, and he would find himself hampered by a want of knowledge which he would have to acquire as best he could. He thought that the points in the paper calling attention to the defects in medical education deserved to be made public, more especially with the object of calling attention to the service rendered by special hospitals, where the work was efficiently done. He pointed out that almost everything that had been done in this direction had been done outside the general hospitals, and if now these cases met with some sort of attention at these institutions it was due to outside pressure. They still interfered with the gynæcologist as much as they could by limiting his beds and the number of his cases, and holding his hand in the free treatment of his cases. One of the objects of the Society was to urge the freer consideration of this difficulty, and so help forward the problem of the education of the student and the practitioner in gynæcology.

Dr. BANTOCK observed that the subject of the paper had been touched upon some months since in a paper by Dr. Dolan, of Halifax. Dr. Lycett's paper, however, covered much wider ground and therefore offered more points for discussion. The author had called attention to the fact that in general hospitals there was not that provision for teaching gynæcology that one might desire. It must, however, be borne in mind that gynæcology was a very difficult thing to teach. It might be all very well to show a class through the speculum how to distinguish between erosion and ulceration,

but when it came to examining the pelvic organs of a woman with the finger and by manipulation the difficulties were obvious. With reference to the rôle of the special hospitals in teaching, he said that the question had come before the authorities of the Samaritan Hospital in connection with the post-graduate lectures, and they had come to the conclusion that it was impossible to teach the subject in the out-patient department. They were prepared to let as many men as possible see the operations, but they did not see their way to allowing men to examine the patients—the only thing that could do him any real good. However desirable it might be that general practitioners should be better acquainted with gynæcology, he thought there were insuperable difficulties in the way of their becoming so. More than that, he doubted whether it was desirable that every man should be a gynæcologist, for the absolute number of cases occurring in the ordinary run of general practice calling for the exercise of this branch of the art was small. He was afraid that it would be found that in the long run special hospitals would not be able to give much more instruction in this respect than general hospitals. If the subject were to be taught at all, it ought to be in the general hospitals, but then only to those men who had natural aptitudes for this particular study, or who proposed to take it up as a specialty. As to giving instruction in abdominal section, he feared that no instruction that could be given on the dead body would enable a man to overcome the difficulties which one was apt to meet with even in the simplest cases of abdominal operations. They could not teach him, for example, how to separate adhesions. Moreover, what a man required most of all was to be able to recognise the structures before him before using the knife, for the various organs were so disturbed that his knowledge of minute anatomy would only lead him into error. He did not think either that it ought to become a practice among general practitioners to open the abdomen whenever in their judgment this was called for. There were few places in this country so remote from a skilled operator as to make it

justifiable for a man who had no special experience to perform such operations. He did not think that the advice given by Mr. Tait in respect of Porro's operation redounded to his credit. Indeed he thought that it was very ill-advised, and likely to lead to a great deal of disaster. As to the proposal to do Porro's operation in cases of placenta prævia, he could not conceive of any rational man entertaining the idea for a moment. Placenta prævia was a condition which was not of such a serious nature as to call for the removal of the uterus—the more so as it was not likely to recur. At the same time the operation was one that in certain circumstances was very useful. As to the frequency of the diseases alluded to by Dr. Lycett, he was not aware that they were more frequent now than they were thirty years ago. The fact was that they were now more generally recognised, and the increase was apparent and not real. That had been shown by Dr. Kingston Fowler in a number of *post-mortem* examinations. As to the diversity of opinion and practice, he doubted whether this was more marked in gynæcology than in other departments of practice. If they put half-a-dozen men to examine any ordinary case and then put them to write out their prescriptions separately, they would certainly get half-a-dozen different prescriptions. The difference, such as it was, would depend upon the mental constitution of the man and upon his individual skill and powers of observation. There was one point which Dr. Dolan had rightly insisted upon, viz., as to the great benefit which a man derived from a course of general practice before giving himself up to a specialty. He was less likely to be influenced by crotchets than one who went, so to speak, straight from school into a specialty. He agreed with what Dr. Smith had said as to the general practitioner not being to blame in most of the cases of cancer. In many of the cases that came to him of advanced malignant disease, the patient had not suspected that there was anything the matter with her, and consequently no opportunity had been afforded to anyone to make a diagnosis. Whatever symptoms there were were attributed by her to the "change of life."

Dr. BEDFORD FENWICK said he differed entirely from what Dr. Bantock had said as to the insuperable difficulty of teaching the ordinary practitioner gynæcology, in proof of which he instanced what had been done in this direction at the Soho Hospital. What had been done there could be done elsewhere, and until this was the case of course it would not be possible to instruct the general body of men. He pointed out that they had decided to limit the number of men to four under each teacher, and they made a rule that no woman was to be examined by more than one doctor, but as the number of patients was considerable, there was an ample opportunity for all of them to obtain instruction. It was only by letting these facts be known that they could hope to persuade other hospitals to imitate. He insisted upon the value of Dr. Barnes' remarks in view of the inquiry which was then going on into the whole subject of hospital administration. So long as a prejudice prevailed against special hospitals and against this class of work, so long would it be difficult or impossible to provide for the education of the profession as a whole in this department.

Dr. R. T. SMITH said he considered that one of the most valuable suggestions was that the general practitioner should keep his mind open in order to avoid making an error in diagnosis. This was very true with regard to cancer of the uterus. Within a few days he had seen an advanced case of epithelioma of the labium, in which the patient had asked the doctor to examine the sore, but he had said, "I am sure from your description it is an ulcer, and I will give you a lotion which will cure it." This was not "keeping the mind open." For six months it was left without his ever looking at it, and the best opportunity of doing good was lost. On the other hand, it was equally true that many patients refused examination. In his own experience he rarely saw cancer of the uterus in an early stage, and this arose from the fact that patients attributed the symptoms to the "change of life," when they consisted of hæmorrhage or discharge. Severe pain led them to see the doctor, but in many cases of rapid cancer pain was not a prominent symptom.

Dr. MURPHY, of Sunderland, observed that all diseases were on the same principle, and had to be learned and treated on the same lines. He mentioned in illustration of the difficulty of teaching gynæcology in provincial hospitals, that on a recent occasion Mr. Tait had demonstrated his operation for the restoration of the perineum at the hospital to which Dr. Murphy was attached, and three weeks afterwards he invited the neighbouring medical men, who had seen the operation performed, to see the results. For so doing he had been summoned before the Medical Board, and it was only by the use of very forcible and intelligible language that a vote of censure and a charge of indecency for having invited neighbouring practitioners to witness the very successful results of the operation was not carried, and recorded on the minutes. He observed that so long as such ideas prevailed it would be impossible to make any great advance in the teaching of gynæcology in the provinces.

Dr. EDIS said he endorsed what Dr. Bantock had said in reference to resorting to Porro's operation for placenta prævia, and he deplored that a leading man should have given the sanction of his authority to such a practice in a condition which could be dealt with in so many easier ways. Moreover, to describe the operation as simplicity itself was very misleading. He recalled a case some years ago, in which some juvenile practitioner had taken upon himself to remove the child by the aid of his penknife alone, and had rushed with his case into print before the child could have been a week old. It was true that the result had turned out well, otherwise, probably, they would not have heard of it. Such a practice, however, if followed could not but culminate in disaster.

In respect of the early diagnosis of cancer, he insisted that the great thing was to educate practitioners to take more notice of apparently trivial symptoms, and if that were done the number of cases in which an operation would hold out some hope of successful intervention would be largely increased. He mentioned a case in which, at the request of the patient, a general practitioner had examined and had diagnosed inci-

pient cancer, which he (Dr. Edis) had been able to remove without recurrence so far. He pointed out that it was important that those who knew something of special hospitals should be represented at the inquiry now going on. He did not see why special hospitals should not be made a school for general practitioners, and though at his hospital they had not gone as far as at Soho, still they had done all that they considered it desirable to do. The subject, however, was surrounded with difficulties. He alluded to the difficulties which he had met with years ago in endeavouring to teach gynæcology in a general hospital, and he thought that the sentiments which prompted the authorities in that case were not yet extinct.

Dr. INGLIS PARSONS, in respect to the early diagnosis of cancer, said he did not see how general practitioners could be expected to send these cases in their early stages to the skilled operator, unless they were first taught to diagnose it. In fact Dr. Bantock, to his surprise, seemed rather against educating the mass of general practitioners in this department. (Dr. Bantock pointed out that he had said that there were insuperable difficulties in the way only.) He said that unless eminent specialists were prepared to go out thirty or forty miles into the country to operate on persons, who were probably not in a condition to pay—and this, too, in cases in which delay was often fatal—he did not see how they were to manage. Porro's operation was not comparable to any other abdominal operation, and unless the specialists would go down, the onus would lie on the general practitioner, who was bound to do what he could for the patient, even if he were reduced to using his penknife and a piece of whip cord. He pointed out that in country practice they had to do principally with poor people. He observed that Porro's operation and craniotomy were often brought into juxtaposition, but as a matter of fact the choice of operation depended upon the amount of obstruction. Where the obstruction was slight, then craniotomy was absolutely safe, and the patients might get well as soon as after an ordinary confinement.

Dr. FENTON said that a point which had been well

brought out was that there were two departments of gynæcology—a major and a minor. He gathered from Dr. Lycett's paper that general practitioners were rather anxious to attack the major gynæcology, and take on cases of ruptured extra-uterine gestation, to perform Porro's operation, and do abdominal section generally. He thought this was a mistake. The necessity for a general practitioner to do these major operations seldom arose. Abdominal sections, as a rule, were not, and had not, to be done on the spur of the moment. Even if some man who was in the constant practice of abdominal surgery could not be brought to the bedside of the patient, the patient could be removed and got to a place of safety and where skilled assistance could be obtained. Cases bad enough to require Porro's operation were generally dwarfs and deformed creatures, whose state there was an opportunity of knowing about beforehand and arranging accordingly. He deprecated the slipshod system of waiting till labour was in full blast before acting. The department of gynæcology the general practitioner should attend to with profit to himself and his patient, was the *minor*. He should be able and ready to curette, to use Pacqueline's cautery, to use tampons, to introduce tents, to fit and adapt pessaries, and the hundred and one things now left to the specialist, but which, much to the comfort of patients, should be done for them by the general practitioner.

Dr. ROUTH pointed out that many of the operations alluded to by Dr. Fenton might be practised upon the dead body, and this was invariably the plan at Vienna. It would be quite impossible for much demonstration on the living body to be given, and even if it were possible he doubted whether it would be safe or right. Dr. Fenwick's plan was not available in the general hospitals crowded by students. He thought that a good deal might be done if advantage were taken of the *post-mortem* examinations to demonstrate the anatomy and pathology by examinations more fully than was now done. Many of the abnormalities might be demon-

strated, too, in the same way. Passing on to discuss the question of Porro's operation, he said that his mind recoiled from the wholesale mutilations which were sometimes recommended. There were indubitably circumstances in which any mutilation was permissible, but certainly not in such a condition as placenta prævia, which did not tend to recur, and in which the lives of both the mother and the child might be saved short of such a terrible mutilation. In any case he preferred the Cæsarian section, the mortality of which was now so much diminished, and which, once successfully performed, left the woman in a position in which it could be repeated if required with comparative safety. He admitted that the general practitioner might not be able nor have had an opportunity of making the early diagnosis in cases of cancer, but then neither had the specialist. Then, also, the same divergence of opinion obtained among specialists themselves, and when one man said it was a cancer another often said it was not, and there the matter rested. He pointed out that in the provinces in smaller towns it was thought very damaging for a man to get the reputation of being addicted to examination of females, though this, fortunately, could not be said to be the case in London. He had known, however, practitioners refuse to make an examination when requested to do so, on that account. In conclusion, he said that he feared they were getting too fond of the knife, forgetting there were a large number of remedies which were unjustly neglected by operators, but which, if properly used, would often render a more serious surgical intervention unnecessary.

Dr. LYCETT apologised for his absence on the previous occasion and expressed his satisfaction at the interesting discussion that the paper had elicited. He felt strongly that many of the topics he had brought forward required ventilation, especially as the great advances that had been made in gynæcology were the work of pure specialists. At present the general practitioner was in an awkward position, and he felt the necessity of defining the exact position he ought to occupy. Although it had been generally admitted that there

was great room for improvement in respect to the gynæcological education of the general practitioner, there had been some little difference of opinion as to the possibility, if not indeed of the propriety, of giving him that education. He quite understood and appreciated the difficulties in the way of imparting such instruction, but there was no branch of the profession that required such careful and special training as gynæcology and obstetrics, and yet they were departments in which the means and methods of instruction left much to be desired. However simple Porro's operation might be in the hands of the gentlemen who had brought it so prominently forward of late, it might be very different in the hands of the general practitioner. The question was: Should students, before receiving their diplomas, give evidence of operative dexterity sufficient to enable them to do the major operations without the aid of the specialist? If not, then they had nothing but to go forward on the old lines, and the mortality in urgent and difficult cases would remain the same as heretofore.

The Society then adjourned.

REVIEWS.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D.Lond., M.R.C.P.Lond. Second edition with 146, illustrations. H. K. Lewis, 136, Gower Street, London.

Among the fresh matter found in the second edition is a short account of Extra-uterine Gestation. The author has introduced this subject because as he very properly remarks, the subject, though obstetrical in its origin, is more gynæcological in its diagnosis and treatment.

Dr. Lewers states, "An account of Dr. Apostoli's method of treating fibroids has been retained in this edition. That this treatment has failed to accomplish a great deal that was originally claimed for it by its introducer, is certain. It is also certain that the treatment in question is attended with considerable danger, and in short it is very doubtful whether it will ultimately find any place in legitimate practice." We certainly are able to endorse the above remarks. We have seen no good come from this treatment in any one case. We have, however, seen several cases in which the patients only escaped with their lives, after having passed through weeks of septicæmic poisoning.

Some of the sections are bald and meagre, that on inversion of the uterus being a case in point. Doubtless the author will supply this deficiency in some future edition.

Practical Manual of Diseases of Women, and Uterine Therapeutics. For Students and Practitioners. By H. MACNAUGHTON JONES, M.D., M.Ch., M.A.O. (Hon. Caus.), F.R.C.S.I. and E. Fourth edition. Baillière, Tindall, & Cox, King William Street, Strand, London, 1890.

In the preface to the fourth edition of Dr. Macnaughton Jones' well-known and popular work the author states:—"The

many advances made in gynæcology during the past few years have necessitated a complete recasting of the fourth edition of this work. I have endeavoured to add all that is of practical importance to the student or practitioner in the recent literature of the subject. Though the text has thus had to be very considerably increased, I have striven to keep the volume of that handy size so desirable in a student's manual. New chapters on Gynæcological Electro-Therapeutics, certain Renal and Vesical Affections and Massage have been added, and over a hundred new illustrations. I am indebted to Sir Spencer Wells for his suggestions in re-writing the chapters on Ovarian Tumours and Ovariectomy; to Mr. Bland-Sutton for his Contribution on the Pathology of Ovarian Cystoma, and to Mr. Malcolm Morris for his revision of the chapter on Cutaneous Affections of the Vulva. I have to acknowledge my obligations for many important facts culled from contemporaneous medical literature, to the distinguished American editors of the Sections on Gynæcological Subjects in the *Annual of Universal Medical Sciences*, the most valuable compendium I am acquainted with of contemporary medical and surgical science.

"I have specially to thank Dr. J. J. Redfern (now of Croydon) for reading the proof sheets, and for the preparation of the complete index and list of authorities quoted in the work.

"The reception given to the last edition of this manual is best shown by its rapid sale; but I may be pardoned for referring to many voluntary expressions of warm approval of it as a text book which I received from several distinguished teachers in the schools of the United Kingdom and America, while I am aware that it has been largely used in India."

As a text book the work is well adapted to fulfil the wants of the student or young practitioner. The author has been careful to embody everything that is new or of interest,

The work well deserves the success it has met.

Sanity and Insanity. By CHARLES MERCIER, M.B., Lecturer on Insanity at the Westminster Hospital Medical School, and at the Medical School for Women. With illustrations. Walter Scott, 24, Warwick Lane, Paternoster Row, London, 1890.

The work which Dr. Mercier has just published is one of the contemporary Science Series and is intended for the use of laymen as well as the medical profession. Such a work has long been needed, more particularly as the question of insanity has occupied a prominent position in the public mind for some time past. No one in the ranks of the alienists is better fitted than Dr. Mercier to satisfactorily fulfil the task of writing a book appealing to two classes of readers.

The author truly remarks that "a knowledge of the facts of insanity must be of service both to those who are liable to become insane and to their friends, for of this malady, more than of any other it is true, that the earlier its beginnings are recognised, the better the chance of prevention, and the more sanguine the hope of cure." The usual conception that the laity have of a lunatic is somewhat as follows:—"He is usually raving, shouting at the top of his voice, and smashing the furniture.

"When not in this state, he is controlling himself, and in the plenitude of his cunning—for he is no lunatic if not cunning—he is lulling the surrounding people into a sense of false security, until he can get a convenient opportunity of cutting their throats. Instead of a hat he wears straw in his hair, speaks of himself in the third person, and talks in ingenious and complicated parables. It is hard to relinquish a simple faith that has grown up with us from childhood, and become part of our very nature; and for my part I shall never forget the shock it was to me when I took office in an asylum containing about two thousand lunatics, to find not one single straw sticking out of a single head in the institution. So far from speaking in parables, they asked for what they wanted

with simple directions, and when they did not get it, their language was as direct and forcible as that of any sane person. Having now spent many years in daily and hourly contact with the insane, the one fact about them which continually impresses me with more and more conviction, is the wonderfully little difference that there is between them and other people. It is not merely that the lunatic is 'fed with the same food, hurt with the same weapons, subject to the same diseases, summer and winter,' as a sane person, but that in his very insanity, in the vagaries of his mind and the extravagances of his conduct, he exhibits nothing but an exaggeration of the same peculiarities which we all possess more or less." As an exposition of the difference between sanity and insanity, the work is most satisfactory. The subject is dealt with in a masterly manner from each practical point of view. We are surprised, however, to find that Dr. Mercier has omitted to discuss the question of the effect of the removal of both ovaries upon the mind of women who have submitted to that operation.

The operation of oöphorectomy is becoming so frequently resorted to for so many different conditions, that it is now high time that some leading authority like Mercier, should undertake the investigation of this question. We shall not here project our own views, as far as we have any on the subject, into this notice ; we have no doubt, that Dr. Mercier, who is in the van of progress in his own department, will do his best to fill up the blank chapter in his most interesting and valuable work.

We cannot conclude this brief and hasty notice, without tendering our congratulations to the author.

*SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.*

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF
CHICAGO.

Regular Meeting, January 17th, 1890.

The President, JAMES H. ETHERIDGE, in the Chair.

Dermoid Cyst of Ovary; Twisted Pedicle; Recovery.

Dr. DANIEL T. NELSON:—The contents of this tumour were entirely of a kind of wheel-grease, sebaceous matter. There was about a gallon of it. It has kept very perfectly without any preparation except being bottled. There were a few short hairs, but no teeth or bones.

I will read you a brief history of the patient.

Mrs. G. B. R. Puberty at fourteen; aged fifty-seven; married thirty-six years; two children, thirty-three and twenty-nine years, both girls; first weighed nine pounds, second six; was in bed at each confinement ten days; nursed both children. Has had three attacks of pneumonia, first while a girl before marriage, ill five to six months; second in 1864, ill a month; third 1880, ten days in bed. During convalescence, while sitting up, suddenly expectorated some four or five ounces of pus and then rapidly recovered; but has since had a cough on rising from her bed in the morning and on lying down. In June, 1888, had a slight attack of peritonitis lasting some three days; hardly in bed. Suffered from soreness for some days after. A second attack of peritonitis occurred in October, 1888; was in bed a week, soreness continuing for a week or more longer. The third and last attack of peritonitis began May 23rd, 1889, and was produced by stooping in her garden to pick some lettuce.

She took to bed that night and was obliged to remain a month. She suffered greatly for some days, and for a time her life was endangered. Was confined to her house two months. During all of these attacks of peritonitis bowels were never confined for many days, and at other times were regular or easily moved by simple laxatives.

The patient came for operation on the tumour, which was recognised months before, on the 30th of November. The patient was of a decidedly corpulent build. The usual abdominal incision was made; some three inches of adipose tissue had to be passed through before the abdominal cavity was reached. The tumour was found adherent to the whole anterior peritoneal surface, but the adhesions were apparently of recent date. The abdominal incision was made some ten inches in length, the whole size of the tumour. This was necessary in order to pass the hand around the tumour to free it of its adhesions. This was done without causing severe hæmorrhage or injuring any of the viscera. After the tumour was freed from its adhesions it was opened by the trocar, but there was no discharge of fluid, which was easily explained on the withdrawal of the trocar, when this sebaceous material began to well out; the opening was enlarged and gradually the whole contents of the tumour was evacuated without any of it passing into the abdominal cavity. When I was able to see the pedicle it was tied and cut off. It is just about the size of an ordinary lead pencil, and was twisted three times around, three complete revolutions of the pedicle. The pedicle was afterwards tied a second time and cut off, so I have this part to show you to illustrate its size. On account of the adhesions I was not able to satisfactorily locate the origin of the tumour. I believe it represented fully and completely the left ovary; it was all I could find of that ovary. The left Fallopian tube was adherent to the exudate about the tumour; the right ovary and tube were also inflamed and adherent, but could be found, but I could not find the left ovary. Of course I did not make as careful a dissection as if it had been a *post-mortem* case. But the con-

dition of the pedicle was an astonishment to me; it did not seem that any blood could pass through the original vessels of the tumour. The tumour had not sloughed, as it seemed to me, simply from the new vessels it had acquired from adhesions the result of recent inflammation. It is possible, of course, that there was some blood supply in other ways, but it seemed that no blood could pass through the natural pedicle. After the last attack of peritonitis the statement of the friends was that she had seemed to grow considerably smaller in size. Whether it was, because the peritoneal effusion was completely absorbed with the fluid portion of the cyst or not, there was absolutely no fluid with the sebaceous material at the operation.

The after-treatment was exceedingly simple, a glass drainage tube was introduced, which was subsequently removed and replaced by a short rubber tube. The extreme temperature of the patient reached $100\frac{1}{2}^{\circ}$. A troublesome cystitis was induced by the use of the catheter and lasted about a week. This gave the patient more annoyance than anything else about the operation.

I have seen two cases of twisted pedicle, one in the case of a solid tumour which was removed *post-mortem*. There was twisting of the pedicle and a peritonitis that so endangered the life of the patient that I did not dare operate, but the *post-mortem* showed that her life might probably have been saved if operation had been attempted.

The instruction to me is that a peritonitis coming on after exertion in a patient with a moveable tumour indicates twisting of the pedicle, and if the case is grave, operate before the peritonitis kills the patient. If the attack is slight it may be well to wait until the peritonitis has passed by; yet it would seem from the treble twisting in this case that waiting was dangerous, the third attack of peritonitis being much the most severe, and the third twist of the pedicle almost cutting off the blood supply; there was grave danger of the complete death of the tumour. If the peritonitis endangers the life of the patient, operation should be proceeded with at once.

Placenta Succenturiata Vaginal Hysterectomy.

By Dr. HENRY T. BYFORD.

I have here a placenta succenturiata which, however, is chiefly interesting from the history of the case. About three years ago I confined a primipara, who had a child at full term after being married three or four months. She was in very bad mental condition, and came to the hospital to conceal the birth. The uterine contractions were so inefficient that I finally had to put her under chloroform and deliver with forceps. Immediately after delivery of the placenta blood poured out of the vagina like water from a kitchen hydrant. I succeeded in checking it only temporarily and partially by bimanual pressure and manual irritation of the interior of the uterus. I then injected tincture of iodine one part and water three parts into the uterus without any effect whatever. Then I injected the pure tincture of iron and immediately checked the hæmorrhage. Her recovery was slow but uneventful.

She was again confined this morning at 2 o'clock. The membranes ruptured several days ago, above the cervix somewhere, the fluid gradually escaped, and labour came on last night between six and seven o'clock. All went well, and the child was delivered without injury to the perineum or cervix at 2 a.m., but the placenta did not come. I used Credé's method of expulsion, and then some traction, but without the least effect. Finally I put my hand in the uterus and attempted to deliver. I found all of the placenta except the lower margin, and the whole of the membranes from the top to the bottom, completely adherent. You will notice that the membranes are abnormally thick and vascular. I went over every part of the endometrium with my fingers, and over some portions three times before all shreds were removed and the uterus contracted. The patient has done well ever since. The extent of adhesions was in my opinion, determined by the iron injection three years ago.

Another interesting fact in connection with the case was the breaking of the membranes before labour came on. This

was, I think, due to the adhesions of the membrane caused by the endometritis, and bears out what I have formerly asserted, that patients who have uterine disease will, in a large number of cases, have the membranes rupture at the beginning of labour. In other words, where the membranes are pathologically adherent they are unusually distended in an irregular manner and rupture early; where not those adherent they gradually separate from below upward, and accommodate themselves to the parts and rupture at the vulva.

This other specimen I wish to place on record as being another fibroid uterus removed through the vagina. It is my third vaginal hysterectomy for fibroids. There are several small fibroids in the uterus, but that in the cervix was the one which was the cause of the greatest anxiety. It seemed to be assuming the characteristics of malignancy. It was very dark and angry-looking from its excessive vascularity, bled easily, and was bathed in suspicious secretions. Hæmorrhages and irritating discharges were the chief symptoms.

Dr. W. W. JAGGARD: I think the use of the tincture of chloride of iron was a sufficient cause for the endometritis, the universal evidence of which is present; but that it was *the* cause, and the only cause, I do not think is proven. It is a difficult thing to prove that an injection of tincture of iron several years ago was the cause of endometritis at a subsequent pregnancy. The endometritis might have occurred from gonorrhœa or half a dozen other things. I think the gentleman should give the history of that case minutely and let it go on record.

As regards the normal separation of the membranes, it is pretty well established now that normally the membranes are not separated above the internal os, therefore their functions as dilator of the vagina and vulvar orifice is accidental and not of sufficiently frequent occurrence to entitle them to much consideration, though when they are present they have some action.

In regard to the second specimen, I would like to ask if there was a microscopic examination of the neck of the uterus

before the operation. A tumor of that size is not, *per se*, an indication for operation in my judgment.

Dr. J. H. ETHERIDGE: The one thing that occurs to me as a little difficult to accept is the assertion that the administration of the tincture of iron is the cause of the adhesion of the placenta three years afterwards, because the constant nutritive changes that have taken place in the whole of the uterus are so great that it seems to me the irritation produced by an injection of tincture of iron so far removed would be entirely obliterated. If the present adhesion of the placenta were caused by endometritis, it seems to me it might be the same endometritis that existed at the time the hemorrhage occurred which called for the use of tincture of iron. I think there is plenty of reason for adhesion in this instance without the exceedingly problematical theory of irritation produced by the tincture of iron. Indeed, I should consider that a very effective barrier against the possibility of pregnancy, which barrier evidently did not exist.

I would like to ask if it is the experience of the gentlemen present that it is always absolutely true that sarcomatous or cancerous cells can be obtained in every specimen of malignant disease of the uterus? The reason I ask is because I know of a case where, according to all possible signs short of the microscope, a woman died of cancer of the uterus, but the examination of a specimen submitted to microscopists resulted in their stating that they could not find any evidence of cancer.

Dr. BYFORD: I will state, with reference to the nature of the second specimen, that in one case I removed *post-mortem* a fibroid sarcoma of the uterus with development of sarcoma into the mesenteric glands and different parts of the body, in which the microscopist was unable to determine whether it was fibroma or sarcoma until I told him there were deposits in the neighbouring glands.

My idea is, in reference to this disease of the cervix that when a woman has reached the menopause—she was forty-three years old—in connection with symptoms indicating

malignancy, we are sometimes justified in removing the uterus even without microscopic confirmation; for the microscope does not always find the malignant element, and when it does it is often too late. We have numerous records of changes in the cervix from one form of malignancy to another, and also of the co-existence of small uterine fibroids with malignant disease of the cervix or corpus uteri. If vaginal hysterectomy is ever to have a future, it must be employed before too much time is lost in waiting for evidences of malignancy and results of tampering treatment. Men still tremble in their boots at the thought of the operation, while its mortality has been already reduced to that of ovariectomy, and almost to that of high amputation of the cervix for carcinoma. This unenlightened conservatism is the blight of vaginal hysterectomy.

I must decidedly disagree with the speaker that the membranes remain attached throughout until the end of the first stage of labour. It is impossible for them to do so during the changes in the shape and size of the different parts of the uterus in labour. This I have already discussed in the *Annales de Gynécologie* (Paris), 1886.

In regard to the effect of the tincture of iron in producing these adhesions, the history of the case favours my view. I had the patient under observation from the time of her first pregnancy. I prevented her having a miscarriage, and have had abundant opportunity to watch her ever since. I am certain there has been no new attack of endometritis since the first labour. She probably had some endometritis at the time of the first labour, and the iron increased it. Although no serious symptoms followed the iron injection, a slight elevation of temperature remained for some time, and it was nearly a year before she recovered good health and ceased to complain of a weak back.

Hysterectomy Clamp Forceps for Vaginal Fixation of Stump.

Dr. HENRY T. BYFORD: I brought these forceps to-night because I happened to refer in my report to a case of vaginal fixation of the stump in abdominal hysterectomy. The for-

ceps is introduced through the vulva, catches up the stump, holds it firmly, and can be made to clamp it in case hæmorrhage occurs. In my first case I left on the elastic ligature and got myself in rather a bad fix with it. In a few days the temperature went up to 102° F. and the odour became very bad. I put the patient on the side, introduced a Sims' speculum, cut off the ligature, and then easily cut off the stump down to the constriction. The patient got along very nicely afterwards. In the last case I stitched the stump very much after the method of Schroeder or Martin. I separated the parts in front of the cervix, turned it into the vagina and transfixed it there with a pedicle pin and thus avoided necrosis. The cervix when released turned up again into the cellular tissue behind the bladder, and is now in a normal position, although entirely extra-peritoneal. The patient has gone home and feels well. This forceps I have devised so that I can sew up the stump with catgut, then put the forceps on through the vagina, and use it to hold the stump in place and so check hæmorrhage by tightening it if necessary.

Dr. ETHERIDGE: I never heard of twenty-four or thirty-six hours until lately. I never left on large forceps less than forty-eight hours. I take off the small forceps in twenty-four hours, but the large ones, covering the ovarian and uterine arteries, I leave on forty-eight hours. I have left a great many small forceps in the vagina thirteen to fifteen hours after an operation, with two large ones, one on each broad ligament. Women differ as to their bleeding; some will bleed profusely and some comparatively little. I suppose it is a difference in the distribution of the arteries and the development of the arterial calibres, because in some instances it seems as if every particle of tissue will bleed in spite of everything, and then in other women I have left on only two forceps and have had no hæmorrhage.

Dr. MARTIN: I would like to ask if in the use of large forceps there is any way of knowing that necrosis of the tissue included in these forceps takes place? Is it not possible to clamp them tight enough to stop hæmorrhage, and at the

same time loose enough so that a certain amount of circulation may occur and the life of the stump remain ?

Dr. ETHERIDGE : I have seen several cases where the holes left in the two cornua of the vagina by the large forceps have continued to discharge for weeks necrotic material which smelled very offensively, but which after a time seemed to gradually fill up from the bottom, and there was complete restoration of all the parts. I suppose the part of the broad ligament left in the bite of the forceps was entirely killed, so, that it sloughed and came away as so much dead material. I have been in the habit of directing a small stream of antiseptic fluid right up into the openings and pulling away the black material with the dressing forceps, getting away all I could by gentle traction, and after a while the discharge would cease.

Dr. BYFORD : I have seen cases in which, after putting on the forceps, all hæmorrhage would be stopped, but you would find the part below so much thicker than that above that the upper part would not become tightly compressed.

Dr. ETHERIDGE : Is not that where you turn the uterus over and double the broad ligament, so that when you get the bite of the forceps on the bend of the broad ligament, it is thicker than the part above ?

Dr. BYFORD : I refer to cases ligated without version of the uterus. I think it is difficult to say whether you have efficiently constricted all the parts in the forceps or not.

Dr. MARTIN : That is the point I make : in cases where the upper portion of the broad ligament is not constricted as much as the lower portion and still hæmorrhage is shut off, if suppuration might not occur ?

Dr. BYFORD : I think in that case the peritoneal exudate might nourish the upper edge so that it would not slough off. It certainly does when ligatures are used.

Dr. ETHERIDGE : I suppose the whole of the peritoneal cavity is shut off at once when you put the forceps on. I do not think there is any infection of the peritoneal cavity likely to occur from the material left in the bite of the forceps, because the peritoneal cavity is effectively shut off.

Another Twelve Months of Peritoneal Surgery ; Fifty-Seven Cases.

Dr. HENRY T. BYFORD read a short paper on this subject, of which the following is a brief analysis :—

All abdominal sections in which there were no adhesions (sixteen) recovered. All vaginal sections (sixteen), with and without adhesions, got well, excepting one death from delirium tremens. Of the twenty-one vaginal sections of the previous year, all recovered, making with those of the present year thirty-seven cases with one death, or a mortality of 2.7 per cent. Hence it is inferred that abdominal sections for pelvic disease in which there are no adhesions ought, as a rule, to recover, and that vaginal section is safer than abdominal section. When extensive adhesions, development in the subperitoneal tissue, or pus accumulations occur, we have desperate cases to deal with and get a high death-rate after our operations. Of the eight deaths of this series, five belonged to this class, viz., one malignant and four developed in the broad ligament.

One of the most important factors in the development of peritoneal section must be the elimination of the accidental. But for a sponge left in the abdominal cavity in one case, the infection by an assistant in another, and an accidental and unnoticed rupture of the stump sac in another case, the general mortality would be 8.77 per cent. instead of 14 per cent.

The determination of the utility of these operations depends largely upon the remote results. In a few of the cases of oöphorectomy for diseased appendages the cure has been immediate and complete, but in the majority the improvement has been gradual. It has been an agreeable surprise to note the excellent results in hystero-epilepsy and mental failure. Twelve cases are reported with immediate or rapid recovery in five cases, gradual improvement in six cases, no improvement in one case.

The author advises against waiting until too late in the

attempt to exhaust all other remedial resources before resorting to the knife, as is so often done.

Four among the eight cases of retroversion in the vaginal sections were cured by tamponing the uterus in position for forty-eight hours after the operation.

Opiates were seldom given. They are contra-indicated during the second, third, and fourth twelve hours *post op.* Salines given during the second and third twelve hours act favourably by filling the intestinal loops with fluid and exciting normal peristalsis, thus tearing up their adhesions and forcing the fluid through them.

An almost fatal case of hæmorrhage is reported upon the removal of the broad ligament forceps thirty-six hours after a vaginal hysterectomy. Ligatures are considered safer when the uterus can be pulled well down.

Three successful sections were made upon one patient—a vaginal oöphorectomy, a laparo-hysterorrhaphy, and an inguinal oöphorectomy.

In the few abdominal hysterectomies the stump was treated extra-peritoneally, and each time with success. In two cases a new method was adopted, viz., separation of the bladder and anterior vaginal wall from the cervix, and fixation of the stump extra-peritoneally in the vaginal canal.

Dr. JAGGARD: I would like to make a few remarks on Dr. Byford's paper. In the first place, I wish to congratulate him on his brilliant performance and great success, which reflects credit on the Society; but at the same time there are some things in the paper that I think deserve attention. I wish to disclaim in the beginning, however, any intention of making a personal remark. This Society is the only tribunal before which the paper will come for discussion, and I do not think it ought to go on record without something being said on the subject.

We judge of Hercules by his foot; Cuvier constructed a megatherium from a tooth; Joseph Leidy constructed a fish from a scale. We are apt to form an opinion of an operator by individual specimens and examples. Take, for

instance, the fibroid uterus that was presented to-night as an indication for hysterectomy. It is hardly fair to construct an operator from a single specimen, although you know a legal axiom is that a witness false in one particular is false in all. This is simply a uterus with a number of foci where fibroid degeneration has occurred. A woman near the change of life, in a few years at most naturally the menopause would have occurred, and then, in all human probability, the change would have taken place that experience and pathology teach us takes place in these growths—they undergo the senile atrophy that the uterus itself undergoes, and not once in a hundred cases do they undergo any cystic sarcomatous change. In that case, in my judgment, there was absolutely no indication whatever for removal of the organ. It was a most heroic operation, if the term reckless is a little harsh. I think where so capital an operation is done the specimen in every case ought to be exhibited. This recklessness in abdominal surgery seems to be the result of the development of the faculty in man that some one has recently termed the abdominal instinct, and which seems to have appeared in this country in the last five or six years. It is an instinct that demands curbing; it is an instinct that occasionally requires a pretty stern rebuke. This rebuke has not yet come, but it will come some day.

In regard to the twelve cases of normal oöphorectomy for general nervous conditions, only a year has elapsed since the operations were performed, and it is entirely premature to draw any conclusions whatever as to the result of the operation on such general nervous conditions. Battey himself places the limit of time before drawing a conclusion at about three years. He says the effect of the operation will last that long. I will not speak of this point further, because it will come up next April when we have the discussion on Tait's operation. In the performance of normal oöphorectomy I think it is obligatory on every abdominal surgeon, before he does the operation, to have a consultation. No physician would think of provoking an abortion without a consultation

at which two other competent men were present, and I think the same procedure ought to be followed in the performance of such a heroic operation as normal oöphorectomy.

Dr. NEWMAN : I would like to ask Dr. Byford in regard to the case that had the morphia habit : To what extent does he consider the morphia habit as contra-indicating such an operation ?

Dr. BYFORD : I do not as a rule consider the morphia habit alone as a contra-indication ; but alcoholism I do. I am sorry that Dr. Jaggard regards normal oöphorectomy as such a heroic operation. I hardly think it corresponds with the usual progressive spirit of his remarks upon other subjects. I have never removed the ovaries for a general condition without finding them diseased. I operate for definite indications, and to relieve the patient from results that would destroy her powers to such an extent that she would be a life-long misery to herself and a useless member of society.

Dr. MARTIN : In opening the abdominal cavity in case of indication for normal oöphorectomy, if you should find the ovaries perfectly normal, as well as the tubes, would you remove them ?

Dr. BYFORD : I might, and for this reason : I should not thus open the abdominal cavity unless I had either diagnosed ovarian disease, or there were symptoms showing that menstruation and ovulation were aggravating or causing trouble elsewhere, and that they must be stopped in order to enable me to cure the patient. We do not operate to cure the disease of an organ ; we operate to relieve the system of the baneful effects produced upon it by that organ. The question is not whether the organ is palpably diseased or not, but would its removal do away with an obstacle to the patient's recovery. We would remove normal ovaries for dangerous, recurrent, otherwise incurable uterine hæmorrhage for fibroids, uterine hyperæmia, epileptic attacks with the menstrual function, as an exciting cause, and the like. Fortunately the operation is quite safe when the ovaries are removed for general conditions only, for there are then seldom any adhesions—they ought all

to recover, as I already have said in my report. More danger lies in the condition for which we operate.

Dr. JAGGARD: If the gentleman will permit an interruption, I do not mean the mere mechanical details of the operation; I mean unsexing the woman, the mutilation of her body, the making of a different individual of her.

Dr. BYFORD: The ovaries are for the purpose of reproduction, and after the sexual system of a woman is modified by the change of life or removal of the ovaries, she is in as good or better condition than before to live out her days. I have not yet learned that a woman is unsexed by the change of life, whether natural or artificial. The cry that we are depriving woman of her God-given organs is nonsensical. Nature herself removes them practically when they are of no more use. When I learn how many women drag out a miserable existence and die for want of an operation or because of delayed operation, I am compelled to believe that conservatism, with all its fine words, causes more misery and death than all of the reckless abdominal surgery.

With regard to the indication for removing the fibroid uterus, I stated my reason, and I have nothing further to say about that except that I do not see the great amount of heroic or reckless surgery involved in it that Dr. Jaggard does. In my opinion, to wait until the worst trouble has occurred is bad surgery.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL
SOCIETY.

The first Meeting of this Society was held at Leeds.

JOHN WALLACE, M.D., President.

Uterus surrounded by Abscesses removed by Hysterectomy.

Mr. MAYO ROBSON, Leeds, first showed the above specimen. It was a case of fibroid tumour of the uterus with double pyosalpinx, accompanied by one or more abscesses in the broad ligament, communicating with an abscess cavity in the centre of the myoma. The case shows that even in the

presence of extensive pelvic suppuration, abdominal hysterectomy may be successfully performed. The woman had been married eight months, and as far as she knew was quite well up to three weeks before admission into hospital, when severe pain compelled her to give up her work and seek advice, when an abdominal tumour was discovered. The tumour enlarged so rapidly, accompanied by severe pain and ill health, it was decided to operate at once. On admission to infirmary, a solid tumour was found occupying the lower part of the abdomen, reaching level of the umbilicus; manifestly uterine, and probably myoma. Behind the uterus, filling up Douglas' pouch, was another enlargement, apparently less solid, seemingly attached to the back of the solid tumour, the uterus itself being pushed above the pubes, almost out of reach of the finger in the vagina. The temperature before operation varied from 100° to 103° ; pulse persistently over 110° , and she had a marked systolic bruit. Operation performed March 24th. On opening the abdomen, the edges of the wound gaped widely, and a myomatous tumour came into view, which could not be brought forward till the incision had been prolonged two inches above umbilicus. Was found surrounded by adhesions at the side and posteriorly. A fluctuating swelling immediately behind the uterus was aspirated, about a pint and a half of offensive pus being removed. The adhesions on the right side were separated without much difficulty, but on the left the sigmoid flexure of the colon was so adherent that it had to be dissected off for several inches, and between it and the uterus another abscess was found and evacuated. The fallopian tubes filled with pus were peeled off the intestines and other parts to which they adhered. An elastic tourniquet was placed around the base of the tumour until the mass was sufficiently isolated from the application of a Kœberlé's *serre-nœud*. The pelvis was then washed thoroughly out with plain boiled water in order to check the oozing, which was rather free. The parietal peritoneum was applied closely over visceral peritoneum, below the wire of the *serre-nœud*, and fixed by

two silk sutures, a drainage tube was inserted posteriorly, and the wound closed in the usual way. The pedicle was trimmed and painted with tincture of benzoin, in which the methylated spirit had been replaced by the ethereal solution of iodoform. Very little sickness followed. Drainage tube was removed third day; the *serre-nœud* in the second week. Patient has made a good recovery.

I. Frost-bite of External Genitals in a Parturient Woman.

By Dr. ALEXEI P. TEPLASHIN (Glasov, North-eastern Russia).

The author narrated the following interesting case. A young unmarried peasant woman, æt. eighteen years, primipara, living at a village three quarters of a mile from the Glasov Zemsky Hospital, had left her home for the latter shortly after the rupture of the foetal membranes which had happened about 10 p.m., on January 5th, a bitterly cold day (the temperature being below—30° Reaumur=—35.50° F.). She had gone afoot all the distance, but used to “rest”—that is, to sit down deep in snow—on every labour pain, notwithstanding her being clad but very poorly and having no drawers (according to the custom of Russian women belonging to the working classes). About four hours after her admission she was safely delivered of a live and strong boy. On the next morning she began to complain of pain about her perineum and buttocks. On examination, the whole perineum and the lower parts of the buttocks and major labia were found to be severely frost bitten and covered with numerous bladders. About evening, the temperature rose up to 39° C., to oscillate at a high level for the following three weeks, during which period the patient was also suffering from severe diarrhœa. In course of time, the integument of the injured region sloughed away, the separation of dead tissues as well as cicatrization and healing proceeding but slowly. On the thirty-fourth day, the woman was discharged with restored perineal and gluteal integuments, but with the lower

parts of the labia replaced by contracted scars.—*Rüsskaia Meditsina*, No. 34, 1889, p. 523.

BRITISH MEDICAL JOURNAL.

Surgical Aspect of Impacted Labour.

By LAWSON TAIT, M.D.

No condition more trying can be placed upon the medical practitioner than the conduct of a case of serious impacted labour in an outlying district, far from the skilful aid of a skilled obstetrician; indeed it may be far enough from the help or advice of his nearest medical neighbour. I have seen terrible instances of the results of prolonged efforts to overcome the impaction by the routine systems laid down in the books—first, the application of the forceps, then an attempt made to turn, then a prolonged, deadly, horrible operation for the evisceration of the child. I have seen cases in which the posterior wall of the bladder and the anterior wall of the rectum have been torn and destroyed by pressure, and the patient escaping, as the saying is, by the skin of the teeth, after an operation in which one life has been lost, another nearly sacrificed, and the reputation of a third human being probably greatly injured.

In discussing the rules for our practice at this point we bring in discussion the treatment of impaction at some point or other within the pelvis where the diameter is below three inches, perhaps below two and a half. In such a case, according to Simpson, the induction of premature labour would be indicated, but this would certainly not apply to the case of a primipara, for I assume that in the great majority of such, the practitioners are called in to women already well advanced in labour, or in whom at least labour has begun before they know anything at all of the complication which they are to overcome, where they find, in fact, the impaction already taken place in face of greatly reduced pelvic diameter.

It is clear, that where a previous knowledge of the condition has existed, the choice of induction of premature labour

is one which ought to be fairly discussed, and probably, in the majority of instances accepted ; but in those instances, where this is not the case, the good regulation practice, according to the books and the teaching of the schools, leaves nothing but the adoption of an eviscerating operation for the destruction of the child ; and it is possible also that doubt may be expressed even in cases where the notice has been given, and where the induction of premature labour may be adopted, for authorities differ upon the value to be placed upon this proceeding, even to the extent of a rendering of its mortality from 5 to 50 per cent. If the mortality be found not to exceed 5 per cent., I think there is nothing to be said against it, but if it approximate anything toward 50, or even 30, then I say most emphatically, the proceeding is to be condemned.

The routine treatment advised by authorities is that of evisceration. I propose to offer the alternative, a modification of our old friend the Cæsarean section ; but it must be borne in mind that there is great difficulty and no small danger by reason of the constant want of precision in modern nomenclature concerning operations. The operation as at present known by that term consists in principle of the preparation of an artificial channel between the uterus of the living or dead mother and the outer world.

The reasons for want of success attending the performance of Cæsarean section are not far to find. In the first place, the operation has to be performed in the great bulk of instances by men who have had no kind of special training, not only in abdominal surgery, but in surgery generally. Most of the operations fall to the lot of men in outlying districts, and this was undoubtedly a factor of great importance in the consideration of the mortality. The cases were not operated upon in their earlier stages, but only, as a rule, after a tremendous amount of ineffectual effort had been exercised to effect delivery in other ways. In other words, the operation was only practised as a *dernier ressort*. The maternal parts were extensively lacerated or contused, and the mother was in the worst possible condition for such a serious undertaking. No

wonder the mortality was high. Then a third and important factor in the mortality was the retention of the uterus, occupied by a large wound, through which probably the hæmorrhage was in a large number of cases fatal, and even when this objection was obviated an organ was left suffering from serious traumatism, the inflammation following which is one of the deadliest perils a woman has to undergo. You all know very well that there is no region in which the inflammatory process is so uncontrollable as in the parturient uterus. So strongly have I been impressed with this that I am prepared to undertake, in the treatment of the so-called puerperal fever, removal of the suppurating uterus as probably the only treatment which we shall apply of a really satisfactory kind.

When we open the bodies of women who have died after confinement from inflammation of the uterus, we find a suppurating peritonitis, which is only a feature of the case. The real trouble is that the enormous venous sinuses of the uterus are filled with decomposing and purulent blood. This would therefore of necessity constitute a large element in the mortality of the old Cæsarean section. Removal of the uterus would obviate it. Finally, the removal of the uterus would entirely relieve the patient from the risks of again being placed in a similarly dangerous position. My thesis is therefore contained in this question: Whether, when you have before you a case of impacted labour arising from causes which you have been unable to ascertain beforehand, and in which neither the forceps nor turning are available for relief, it will not be better to put all eviscerating operations on one side, and proceed to remove the foetus through the abdominal walls of the mother?

I believe that the operation which I advocate is simpler in its performance than the application of the long forceps, and that any man who could do the one could certainly do the other, as I propose to lay it down before you. Eviscerating operations are always of the most protracted and terrible kind, absolutely fatal to the child, largely destructive to the mother, and may possibly be fatal even to the operator him-

self, who runs no small risk of injuring himself in the removal of the sharp fragments of bone. In advocating the performance of abdominal section in such cases it becomes perfectly evident that simplicity must be the order of the day. We must have no rival incisions nor complicated kind of sutures, but a simple, straightforward method of proceeding which may be understood by any one and practised by the least competent amongst us. You must bear in mind that in the abdomen containing a pregnant uterus the conditions must always be alike, and that therefore this operation will always differ from all other instances of abdominal section, where, almost without exception, variety is the order of the day.

It is practically impossible for every practitioner to be provided with all the numerous instruments which are wanted to make up the paraphernalia of the scientific obstetrician, while he would inevitably have at hand the few simple instruments required to perform the operation for which I am now arguing that it ought to be substituted for all the destructive and mutilating operations on the fœtus in impacted labour. What is required, you may carry in your pocket case: two or three pairs of catch forceps for arresting bleeding points, a small sharp scalpel, two or three bayonet-pointed suture-needles, some silk, a piece of india-rubber drainage tube, and two needles of steel wire, and none better than the ordinary stocking knitting-needle can be found.

The first step in the operation is the abdominal incision, four inches in length, involving first the skin and then the muscles down to the sheath of the rectus, all of which ought to be divided by a sharp knife at one blow; then the tendon of the one or other of the recti is opened, the muscular tendons fall aside, the posterior layer of the tendons is nipped up by two pairs of forceps and divided between them. The extra-peritoneal fat is treated similarly, then the peritoneum raised again by two pairs of forceps, a slight notch being made between them; and the moment this is effected air enters, and all behind falls away. No director is required, nothing but an observant pair of eyes, lightly applied forceps,

and a delicately applied sharp cutting knife. The finger is then introduced into the peritoneal cavity, and the relations of the uterus and bladder exactly ascertained. The peritoneum is then opened to the full extent of the four-inch incision, and the cut edges of the peritoneum are seized on each side by a pair of forceps and are pulled severally to the respective sides. No better retractors can be employed.

The piece of india-rubber drainage tube about eighteen inches or two feet long is now held as a loop between the fore and middle finger of the left hand, and is by that means slipped up over the uterus and pulled down over the cervix, passing the fingers behind the cervix to see that coils of intestine are not included in it. One hitch is then made on the tubing when it has been got as far down as possible, and it is pulled as tight as is consistent with safety. The second hitch may be made in it, but what is far better, an assistant keeps the tube on the strain, so that the one hitch will be quite enough to effect the most efficient clamping.

A small hole is then made in the uterus, just large enough to admit the finger; if it is possible, the position of the placenta may then be ascertained; if not, the right forefinger follows its colleague, and between the two, by gentle rending, an aperture is made in the uterus, and the leg of the child is seized. The foetus is then carefully delivered feet first, and this, despite all the authorities on the contrary, is by far the best proceeding; less blood is lost, and it requires but very gentle manipulation to relieve the head.

As soon as the foetus is removed the placenta is sought for, and removed similarly; the uterus itself being then completely contracted by this time, is pulled out of the wound, and the elastic ligature is tightened once more, and finally arranged round the cervix, and the second hitch is applied. The main details of the operation are now completed; all that is required is to pass the needles through the flattened tube and through the uterus, and out at the other side, forming a St. Anthony cross or two parallel parts to support the weight of the uterus and the stump, and to keep it outside the

wound. A complete toilet of the peritoneum is then made, not forgetting the anterior vesical *cul-de-sac*; stitches are passed in the ordinary way to close the wound accurately round the uterine stump.

The uterus is now removed close down to the needles and strangulating rubber tube, so as to leave a little tissue above. It does not do to run any risk of the ligature slipping off, though this is hardly possible after the needles have been placed carefully through the structure of the tube. A little perchloride of iron is then rubbed gently over the surface of the stump; it is dressed with dry lint and some dry cotton gauze, an ordinary obstetric wrapper is put on, and the operation is at an end. The operation really takes very much less time to perform than it takes to describe, and as I have said before, because the details must always be the same as an operation in which there never can arise any unforeseen or unexpected difficulty.

A Contribution to the History of Ovariectomy on the Insane.

By W. P. MANTON, M.D., Detroit, Michigan.

Of late the subject of insanity following surgical operations has been brought so repeatedly to the attention of the profession that this condition which, eighteen months ago, would have been considered as of rare occurrence, is now recognized in the light of accumulated evidence as a comparatively frequent sequela of surgical practice.

Mr. C. T. Dent, in an admirable paper,¹ mentions three ways by which surgical operations may produce physical disturbance: 1. By anticipation. 2. By the actual operation, which may cause pain, afford relief, entail shock, &c. 3. By the after-effects. "These," he says, "like the actual operation, may act by producing pain or giving relief, or by setting up septic mischief." He then goes on to say that "A still more important factor in producing physical disturbance is

¹ *Journal of Mental Science*, April, 1889, p. 1.

mental reaction. The relaxation of control previously exercised, the loosening, as it were, of the mental tension, or the physical disturbance resulting from the removal of a diseased part, which had led to much mental contemplation and called up unduly the subjective qualities of human nature, are all factors which, to say the least, must be taken into account more or less in successful after-treatment. The sea may calm down after the storm has disturbed it, but once in a way wreckage will be seen floating on its surface."

This writer, while not denying that natural or inherited mental instability may be found in the history of some of these cases, believes that in the majority of instances this is not so. My own limited experience does not agree with this, for in the few cases which have come under my personal observation there has been a distinct history of a neurosis.

Without entering farther into the discussion of this very interesting subject, which belongs to psychiatry and not to gynæcology, I desire to present for your consideration a case which is not only remarkable, but unique. As will be noticed farther on, the cause of insanity in the subject of this record is put down to a trifling operation; some months later a capital operation is performed with complete restoration of the mental balance, but this soon gives place to a condition resembling the first state, differing from it only in degree.

Miss A. M., German-American, single, aged thirty-four, a dressmaker by occupation, was admitted to the Eastern Michigan Asylum, December 27th, 1888. On the mother's side the family history is good, but the father is reported to have been a heavy drinker, and to have died in his forty-fifth year.

The patient is a small blonde, weighing seventy pounds. For several years she is said to have been delicate, and for eight or ten years nervous. In February, 1888, she suffered from abdominal dropsy, and her family physician reports also having found a tumour simulating the spleen. There was likewise an enlargement of the uterus, or a tumour near it. Eleven quarts of a light-coloured fluid were aspirated from

the abdomen at this time. Following this she suffered much pain, and about a month after the operation, contracted a low form of fever, from which she passed into a state of acute mania, frothing at the mouth, barking and snapping at her friends, so that she was thought to be affected with hydrophobia. When she regained her strength sufficiently to go about she became indecent in her language, untidy in her habits, and inclined to assault those about her.

On admission to the asylum she was extremely feeble and emaciated, and much depressed mentally, having delusions of apprehension. For a time there was a slow improvement in her general condition, but she never became strong or had good health. At times she would be very noisy, at others quiet and indifferent, paying no attention when spoken to. One distressing peculiarity in the case was her tendency to fasten on to some sentence and repeat it over and over in a monotonous voice from hour to hour, ending each period with a "huh." Her appetite was capricious, and sometimes excessive, which may have given rise to her most frequent formula, "A piece of bread and butter, please, huh?" or "Give me a drink of water, please, huh?"

On January 1st, 1889, it was noted that her feet were much swollen the night before, and that her upper eyelids were puffy in the morning. It was thought that she was failing fast, her general condition being precarious. I saw the patient at the request of Dr. Henry M. Hurd, Medical Superintendent, and examined her under ether. She was then quite feeble and much emaciated. The abdomen was slightly distended by a kidney-shaped tumour, the hilus of which pointed downward. The growth was movable in all directions, but especially upward. It was hard, somewhat nodulated, but fluctuation was not to be obtained. The history of the case, and the general physical signs, led me to suggest that possibly the tumour might be a floating cystic kidney. I was not able, however, positively to exclude ovarian cyst. At my suggestion the patient was put on a tonic treatment and kept in bed a portion of the time. The

result was most gratifying ; she gained in flesh and improved in every way. It was a question in our minds whether the presence of the abdominal tumour was not responsible for all or a part of the mental condition ; and it was decided that while the removal of the growth might have little or no effect on the disordered mind, there could be no doubt that in a general way such operative treatment would be productive of good. I therefore undertook the operation May 26th, kindly assisted by Drs. Burr, Morse, and Lansing, of the asylum staff ; Dr. Rouse, of East Saginaw, the patient's family physician, also being present. On opening the abdomen it became at once evident that the tumour was ovarian, and attached below by a long thin pedicle, to the left side of the uterus. It was also fixed above to the diaphragm by a second pedicle (adhesion-band), which was thinner and more vascular than the true pedicle. There were no other adhesions. The growth was thus guyed, as it were, above and below, which permitted considerable motion, particularly upward, as the pedicle was somewhat longer than the adhesion. The right ovary was found to be greatly enlarged and cystic, hence also was removed. The weight of the tumour was five pounds.

Convalescence from the operation was speedy and uninteresting. The mental phenomena presented were, however, remarkable. It was as if the clouds had broken away after a storm, leaving the whole body illuminated by the awakening intellect. She apologized for all the trouble she had caused, and, to the nurse, expressed much concern in regard to her personal appearance. During the succeeding few days her mind was perfectly clear and her conversation rational. She greatly enjoyed talking with the nurse, and seemed to remember much that she had done since her admission to the asylum.

June 2nd, her mind became somewhat dull and clouded, and she remained with closed eyes most of the day. From this time on to the 25th of the month her mental condition varied, but she did not lapse to her former state. On June

25th she was allowed to return to her home, as she had several times expressed a desire to do so, and it was thought that the change might be of benefit. The journey was a short one, but the patient was very restless and impatient to reach her destination. Her expectations were not, however, realized; once home, she continued restless—walked about the house, noticing the changes in furniture, &c.—and expressed her disappointment, as things did not look natural. She asked for medicines, such as she had had at the asylum, and wanted to go back.

About four o'clock the next morning, after a very restless night, most of which was spent in walking about the room, the patient suddenly rushed from the house, clad only in her night clothes, and before those who were following her could interfere, sprang into the well. She was immediately rescued from her perilous position, rendering herself as much assistance as she could. An hour later she again repeated the performance, and was again rescued. The patient's friends had by this time concluded that the asylum was the best place for their charge, and she was accordingly returned, having been absent somewhat less than twenty-four hours. Her condition since that time has been one of slow mental retrogression toward her former state. Her attendant tells me that she is not as bad as she was before the operation, and she certainly has improved greatly in her physical health. The present indications seem to point to ultimate recovery.

As throwing some light on the etiology of the mental symptoms, it may be mentioned that the patient's urine had been examined during her early stay in the asylum, and a small amount of albumen, but no casts, discovered. This was the condition of a specimen examined the morning of the operation.

June 5th, the specific gravity was 1,020, and there was a heavy deposit of phosphates, some pus, and a trace of albumen.

June 22nd, the specific gravity was 1,016, the amount of albumen considerably increased, while pus, epithelium, uric

acid, calcium oxalate crystals, and hyaline casts were present in the sediment. Subsequent examination of the urine gave essentially the same results.¹

I am much indebted to Dr. Christian for these urinary analyses, and to Dr. C. B. Burr, medical superintendent, for notes of the case.

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF
CHICAGO.

Annual Meeting, October 18th, 1889.

The President, CHARLES T. PARKES, M.D., in the chair.

President's Address : Spina Bifida.

GENTLEMEN,—As the time has arrived for me to arise and perform my present duty, I am more and more convinced that I have committed a great fault in not having prepared the stated address which you expect from the President of this Society on his retiring from office. One reason that led me to commit this fault was the ever-present fear of my inability to present any general subject to you that would attract your attention. Another reason was that I am loth to keep you for any length of time from the entertainment in the other room, which I have been partially instrumental in preparing for you.

One of the departments promulgated in the organization of this Society was that of Pediatrics, and I have thought that perhaps it would be of interest to you for me to present very briefly this evening some experience I have had in that department during the past year. This will consist in the presentation of three cases of spina bifida subjected to surgical operation. For all time past surgeons have been very anxious about the care that should be given to such cases, owing to the fact that a large percentage of the cases operated upon

¹ Since the above was written a sister of the patient has been admitted to the asylum, suffering from melancholia.

has been followed by fatal results, and they have felt disturbed about them because these patients, as a rule, if left to themselves, succumb at an early period to a fatal ending. So it seemed to me the presentation in a few words of these cases might be interesting to you, and possibly a suggestion as to some absolute rule which could be adopted towards their cure. And as well it may be of interest for me to very briefly go over the sayings of some of the authorities I have been able to consult, and present a few statistics.

Koenig says that out of ninety cases only twenty reached the age of five years, and that the majority of cases that live any length of time show paralysis of some muscles from pressure. If the sac suffers rupture the case may die from loss of cerebro-spinal fluid, or, more rarely, from some form of spinal meningitis. He suggests, as methods of treatment, that compression is useful only in rare cases. In puncture the head of the child must be placed low in order to prevent the too rapid escape of the fluid, which gives rise to convulsions and death. Koenig lost a case in this way. (Within eight months I have seen a similar case in the practice of a well-known physician of this city. The child was subjected to puncture, when not more than a drachm of fluid was drawn away, but death ensued immediately.) Puncture prevents rupture of the sac, and may cure in rare cases. The most complete antiseptic precautions are necessary in practising this method. He recommends, also, puncture with injection of the following solutions:—viz., iodine, gr. iv. ; potassium iodid., gr. xij. ; aqua destillat., $\frac{3}{4}$ i. After puncturing the sac with a hypodermic syringe and closing the opening into the spinal canal with the finger, the barrel of the syringe is filled with the above solution, which is injected into the cavity and left for a few minutes. The sac is then emptied and refilled with pure water. If no harm occurs, this is repeated often enough to cure. Debout (quoted by Koenig) collected sixteen cases treated in this way, with fourteen cures. Koenig reports one case cured by direct incision and close suturing. Nelson reports one case cured by incision under antiseptic gauze.

Professor Albert, of Vienna, gives the following summary of treatment:—1. Tapping. Sir Astley Cooper had one successful case. Our experience with puncture of hydrocele, under antiseptic precautions, would indicate that there would be comparatively less danger in this method, but not much hope for cure. 2. Drawing woollen threads through the sac excite adhesive inflammation has been used, but the case ended fatally from spinal meningitis. 3. Compression has cured in extremely rare cases. 4. Ligature *en masse* in the pedunculated forms has succeeded in a few cases. 5. Puncture with subsequent injection of iodine has been introduced by Velpeau. Chassaignac has had a number of brilliant results from this method, but it must be remembered that it should be applied only in cases in which there is a small pedicle, which has to be constricted at the time of using the injection. 6. Excision has had some good results, and certainly promises well under antiseptic precautions. Dr. Robert W. Parker, of London, withdraws a portion of the fluid from the sac with a hypodermic syringe, and then injects with the following solution:—Iodine, gr. x.; potass. iodid., gr. xxx. to 3 ij. Albert gives a number of cures in the following table, compiled by Marchand:—

		Cured.	Died.
Compression	4	4	—
Puncture.....	57	17	40
Injection.....	55	42	13
Ligature.....	16	10	6
Excision	8	6	2
Incision.....	5	2	3
Amputation.....	5	4	1
Plastic.....	3	1	2
Total,		86	67

Over 50 per cent., as you see. This method is adapted to those cases in which there has been some attempt apparently on the part of Nature to shut off the sac from the general cavity of the spinal canal, even if there is a somewhat

pedunculated condition of the mass. But all authorities agree that some other method of treatment should be adopted if the formation is sessile—that is, in cases in which the greatest circumference of the mass is at its base. It is said that these cases, if treated by injection of the tincture or any preparation of iodine, would be certainly damaged, and death would probably result from inflammation of the spinal meninges.

It is hardly necessary for me, in the presence of this august body, to speak of the condition of the tumour itself further than to say that there are three recognized varieties. In the simplest form there is merely a protrusion of the membranes of the cord, and the sac is made up entirely of this protrusion and contains none of the elements of the cord—meningocele.

Another variety is that which contains in the interior surface of its walls formations of the spinal cord—or a myelomeningocele. A third variety consists of those peculiar and very infrequent cases in which the central canal of the spinal cord is dilated—a syringocele, as it is termed. We can understand that any operative procedure that concerns the spinal cord is serious; but in these latter days, when surgeons attack the brain in all its parts for many varieties of disease, and perform the most rigorous operations on the cerebral hemispheres with success, it should not be thought harmful to subject the spinal cord to simple procedures in proper cases, in the hope of benefiting them.

So in the cases, three in number, that have been presented to me for care in the last six months, I have adopted the plan of opening the sac freely, isolating the lining membrane of the sac (which I have found can be easily done), and removing it close to the opening in the spinal canal. After isolating it from the other elements of the sac wall down to the spinal canal, I ligate it with catgut ligatures, and then sew up the remnants of the sac wall with three series of sutures. The first one brings the sac wall together as close down to the opening in the canal as it is possible to place the stitches; the second series brings the walls together half-way to the edge of the incision; and the third series closes the external wound.

None of the sutures passing through the skin are permitted to enter the deeper layers.

The first case that came to me was a little child of German parentage, four weeks old, badly nourished, small and cachectic. There was a bluish-red, fluctuating, translucent tumour in the lower lumbar region, three inches in diameter, with a moderately marked pedicle an inch and one-half in diameter. The fluid could be reduced by pressure, which induced evident pain and crying, and if persisted in would probably have brought on convulsions. This child was prepared for operation very carefully, as far as the surface of the body was concerned at the seat of operation. It was scrubbed several times with soap and water, and then several times with bichloride; then the area of operation was surrounded by aseptic towels. An incision was made directly through the centre of the tumour, and of course the fluid escaped; but there was no evidence of nervous irritation in the child. An assistant's finger was kept in the opening, which was seen, about as large as the end of the little finger, through the lamina of the vertebra, so as to prevent too much of the fluid escaping from the spinal canal. The first thing I noticed was that running through the centre of this cavity was a little ridge covered by the lining membrane. In examining this ridge more closely I found it was made up of the terminal nerves of the spinal cord. These were dissected very carefully away from the top surface of the sac wall, the covering of the interior of the sac was also removed, and they were dropped directly into the cavity of the spinal canal, without severing them, with the exception of two branches which seemed to pass off laterally. Then the lining membrane of the sac was separated in all portions with the handle of the scalpel until it represented merely a little pouch sticking out in the opening of the lamina. This was puckered up and then ligated as close down as possible and cut away without leaving anything but the internal walls. Then a continuous catgut suture was applied, bringing together the walls of the sac close down to the spinal canal; then a second and a third was applied to the

mass of tissue, then the skin edges were approximated to each other. This patient was a small, badly-fed youngster, as weak as is likely to be seen, and one that you would not think could stand an operation of this kind; but he showed no bad symptoms after the operation. There was no rise of temperature and no pain, and the healing process was completed inside of ten days. Of course great care was taken in the application of aseptic dressings and the prevention of discharges from the rectum and bladder from coming in contact with the wound. The child recovered entirely. For two weeks after the operation there was a partial paralysis of the lower extremities; but this gradually disappeared, so that tickling the soles of the feet or pinching the surface of the limbs caused a movement which showed that the child used his limbs without difficulty.

The second case was certainly one of myelo-meningocele, as the elements of the cord were in the sac and attached to it. He was a very robust little youngster, seven weeks old, of German parentage. This little one had a spina bifida at the upper portion of the lumbar region which was fully three inches across in either direction. It was not pedunculated to any great extent. It was ulcerated on the surface. The child was put to sleep and treated in exactly the same way as the case I have just related. In this case there were not so many of the elements of nerve tissue as in the other, but some of the nerve fibres ran over the surface of the sac. There is an external sign which plainly indicates the presence of the elements of the cord in the sac, in many cases. You will find a distinct furrow running along the centre of the sac, at other times a distinct depression of the posterior surface of the spina bifida. In this case there were no such signs. The opening in the lamina was as large as the end of the middle finger. The same procedure was adopted as in the preceding case. Nothing could have come off more readily than the internal lining of this spina bifida, and the loose tissue between it and the sac walls was easily demonstrated. There was no difficulty in ligating the sac walls separately. This child recovered without any evidence of trouble.

The third case was a cachectic child four months old, of German parentage, with good family history. It was a pure meningocele. The tumour occupied the middle dorsal region. Its walls were very thin, and the surface had begun to ulcerate. The fluid could be displaced into the spinal canal without difficulty, but the manœuvre was accompanied with signs of pain, crying, and distress. When the fluid was displaced the opening could be felt, and was sufficiently large to represent the width of two laminæ. In this case I did the same operation as in the other instances. I had no difficulty whatever in separating the arachnoid membrane from the interior of the sac, but experienced difficulty in fastening it at the bottom, owing to the size of the opening. The others were comparatively small, this was large. In this case I departed from what I considered should be an absolute rule—viz., the sutures which approximate the sac wall close to the spinal canal should never be allowed to pass through the integument. I was dissatisfied with the appearance of the stump, and passed a suture through the bottom and tied it in two places so as to make a little more pressure on the opening of the spinal canal, with the idea that the fluid would be retained better. The child did well for a week, then showed signs of fever and passed on to septic meningitis, from which it died.

I think these cases are very interesting as far as they go. This operation is certainly as free from danger as injection, which is always accompanied by a certain amount of danger, because one cannot always be sure that the interior of the sac is cut off from the spinal canal.

With reference to the affairs of the Society I have but little to say. Usually the retiring President has some suggestions to make as to the conduct of business; quite a number of things have come to my mind which it might be proper for me to refer to, but after passing them in review I have concluded that I have nothing to say, that the conduct of the affairs of the Society is as perfect as it can be. I thank you for the honour you conferred upon me a year ago in electing

me President of this Society. I also wish to express my gratitude for the courtesy shown me on all occasions.

Regular Meeting, November 22nd, 1889.

The President, JAMES H. ETHERIDGE, in the Chair.

Outerbridge's Intra-Uterine Stem Pessary.

Dr. D. T. NELSON: I have some instruments here that may be suggestive, perhaps. We have all used all types of intra-uterine pessaries, I presume, for sterility and flexion and the like. Here is the latest that you have seen, or seen the pictures of at least—Outerbridge's, of New York. I have used them with some degree of satisfaction, and yet sufficient time has not elapsed for me to say definitely what their advantages or all of their disadvantages are. One disadvantage I have found is that the plating after a little time, in some cases, is destroyed by the secretions, and we have the metal beneath, which I believe to be iron, exposed. It does no practical harm, except that the instrument cannot be worn a great while after the plating is removed without becoming irritating to the tissues from corrosion. There is a special instrument for their introduction which I find quite important. It is a pair of forceps-like short blades which compress these points. They are small enough, so that theoretically, they can be passed with the pessary into the uterus; but practically the cervix has to be dilated before they can be introduced, and then the forceps are withdrawn. Seeing some of Spichen's hard-rubber drainage tubes, it suggested itself to my mind at once whether an instrument might not be made of the stem pessary type in the same way by simply adding a disc to the end to prevent their being pushed into the uterus. I have not used them yet, have just received them from the manufacturers, Charles Truax & Co., and have brought them here for criticism and suggestion. I can readily see that probably they may be difficult of removal if they were pulled straight out, and might be broken, but they

can be readily unscrewed by turning, like a screw. This is certainly large enough for any purpose that might be desired. Their advantage over any of the models I think, will be acknowledged by any one: they are flexible, so as to allow any position of the uterus and still keep its canal patulous. Their inflexibility is one disagreeable thing about the metal stem pessaries; these have not that objection. What others they may have, subsequent trial will give us a better opportunity to decide.

Dr. E. C. DUDLEY: I have heard that an intra-uterine pessary is a good thing to watch, and think it is so good a thing to watch that I have never had any experience in using it. The uterine canal is a natural drainage tube, and most of the intra-uterine stem pessaries impair it as such; consequently the secretions are retained and become decomposed, with all the unfortunate results of such decomposition. This intra-uterine stem pessary of Outerbridge's that Dr. Nelson has shown obviates that difficulty; it does not interfere at all with drainage, and it seems to me to fulfil the indications of an intra-uterine stem better than any other instrument. I have used it in but one case, but can make no report yet, except that the instrument is tolerated without discomfort. The uterine secretions should not corrode the metal if it is gold-plated.

Dr. NELSON: There is just the point, it is not thoroughly plated; there are infinitesimal cracks in the plating, which is the cause of the secretions injuring the metal underneath. I have used several of them, and two, at least, have given me that annoyance, so that I was obliged to remove them.

Dr. JAGGARD: I believe the pessary was introduced with an idea of the treatment of sterility. I would like to ask what the results have been in that respect.

Dr. NELSON: I may answer for myself. I have one case I suspect it was a cure for, but I am hardly able to report more than progress as yet. In one case it was used for dysmenorrhœa, in which it has seemed to be a perfect cure. In other cases wearing it, sufficient time has hardly elapsed to report even progress.

Dr. DUDLEY: In dysmenorrhœa and sterility, with stenosis of the uterine canal, the dysmenorrhœa and sterility are due not so much to the mechanical difficulty in the way of menstruation and of pregnancy, as to the fact that the stenosis causes a retention of the uterine secretions, which become decomposed and which irritate the uterine mucosa, which being thus irritated causes pain in menstruation and also furnishes such hostile surroundings as to make it impossible for the impregnated ovum to develop. This pessary of Outerbridge, by establishing perfect drainage in these cases, fulfils a very important indication.

Patient upon whom conservative Cæsarian section had been performed two years before.

Dr. W. W. JAGGARD desired to exhibit a woman upon whom two years before he had performed the operation of conservative Cæsarian section. In order to gain adequate knowledge of the prognosis of the operation it is necessary once in a while, to call the roll. Menstruation, re-established within six months after operation, recurs every three weeks, and is profuse though not painful; before the operation, of the four-week type and scanty. Uterus is in mobile anteversion and there is an adhesion between the abdominal cut and the fundus. Patient has not conceived since the operation.

There is present a large abdominal hernia that occurred one year after operation, suddenly upon lifting a heavy wash-tub. During the operation Dr. Jaggard was careful to cut through the diastasis of the recti, and is certain no muscular tissue was divided. Of course tendinous bands and the sheath of the muscles were severed. She wore a "jockey strap" for twelve months.

The patient's general health is excellent, and she leads a busy life as a midwife. She is confident that she will become pregnant before another year, and awaits delivery as the best time for the cure of the hernia. The child died sixteen days after birth, from pneumonia due to exposure.

Dr. NELSON : Did the hernia supervene directly after she got up from bed ?

Dr. DUDLEY : I heard of a man who had a patient with a great deal of fat on the abdominal walls ; he took out an elliptical piece and then could not get the abdominal walls together again.

Dr. EARLE : There would be the same hope of success here as with any other hernia of its size in the same position. The size of the hernia reminds me of one I saw in Michigan three or four months ago. A sister came over and talked with me about the condition of the patient, and I selected Dr. Hoadley to go over there with me and see the hernia, and prepared to do an operation in case it was necessary. The hernial sac and protrusion was much larger than this, two or three times as large, with two or three points of ulceration that had almost come through. The incision was as large as a good-sized saucer in circumference, and the sac was taken off. The omentum was found to be adherent in a multitude of places. It was united, sutured, and the wound healed very well. The hernia has not recurred up to this time.

Dr. DUDLEY : I would make an incision here into the abdominal cavity, removing such redundant skin as the mechanics of the operation might require ; I would then take the edges of the fascia which were incised in dividing the recti, one over the other ; then I would split the abdominal wall on each side by using a method similar to that employed in Tait's operation for perineorrhaphy, and in that way get a surface for union, then close the wound by three sets of sutures, peritoneal, fascial and deep.

Dr. NELSON : I would suggest some buried sutures running in either direction, to bring the fascia together.

Dr. DUDLEY : It is not necessary to bury them ; they can be passed from the skin to the fascia.

Dr. JAGGARD : As the woman is now, with a well-fitting strap she can keep the hernia inside.

Dr. DUDLEY : It is an awkward thing to do, and a radical cure could be effected.

Dr. JAGGARD : She hopes to become a mother.

Dr. DUDLEY : She cannot be killed ; that has to be tried.

Placenta Marginata.

Dr. W. W. JAGGARD : The specimens I want to call your attention to, gentlemen, present several points of interest. In the first place, I have here a very interesting specimen that Dr. Sawyer kindly gave me to show to my class. Here is the chorion and here the placenta. At the edge of the chorion, between it and the placenta, there is a circular band that, in the recent state, was white, hard, even gristly. On section you see the white, gristly substance ; you can see also the hard, fibrous tissue distinct from the normal placenta tissue. It is a typical example of a very interesting condition technically known as marginal white infarct. It is probably due to hæmorrhage occurring in the early months of pregnancy about the time when the circular band is formed.

Syphilis of the Placenta.

The second specimen is an interesting one which Dr. Watkins gave me. There are two interesting anomalies in connection with it ; first, the insertion of the cord into the membranes—velamentous insertion of the cord. This is a typical example. I would like to call attention to the velamentous insertion of the cord in connection with the very interesting paper our Secretary read at the last meeting of the American Gynæcological Society, in which he referred to the insertion as one evidence of a very ingenious theory of the cause of placenta previa atrophy. I am not able to agree with the Secretary in his opinion on this matter, because the weight of evidence is to the effect that the insertion of the cord depends on foetal causes and not on causes external to the chorion. It does not make any difference how many revolutions the ovum may have made, the insertion of the cord depends upon the spot that the allantois strikes, not on

any exterior cause, so far as we know. But the point of special interest is that this specimen is alleged to be an example of a syphilitic placenta. It has the general characteristics of a syphilitic placenta. It is relatively large, and was pale in the recent state. On section you can distinctly see nodules. One test of a syphilitic placenta is on microscopic examination, the detection of gummata. The only condition resembling the syphilitic placenta is the condition presented here, the white infarct.

White Infarct of the Placenta.

This case I came into possession of an hour ago by the courtesy of our President. This is a typical white infarct. It may be remarked, in passing, that Fraenckel has never been able to demonstrate syphilis of the placenta earlier than the six month.

Myxoma Multiplex of the Placenta.

This case is one I saw in consultation with Dr. McGaughey. It is interesting because it is an unusual anomaly. It is myxomatous degeneration of the placenta. Clinically, it presented the symptoms of accidental hæmorrhage from premature detachment of the placenta. The cord is long and normal. The fœtus has a double harelip, and webbed toes on the right foot. The fœtus was dead some time before delivery. Whether there is any connection between the harelip and the anatomical change in the placenta is not demonstrated, but it is likely.

A Case of Syphilitic Placenta.

Dr. T. J. WATKINS: The history of the case referred to by Dr. Jaggard is brief. I was called in to attend the woman, who was about six months pregnant. I found labour quite well progressed, and the child was delivered about two hours

after I arrived. It was dead, and had been for some time, as sufficient decomposition had taken place to nearly remove the epidermis. The placenta came away very readily, and I then noticed its peculiar character. Dr. Jaggard kindly took charge of it, and promised to present it to the Society.

The woman gave no history of syphilis; but she was very anæmic and had a mitral heart murmur. I could find no other cause for this than that it might be due to syphilis. Her heart had caused no disturbance before, but commenced to trouble her two or three months after she became pregnant. Examination of the urine was negative. The husband probably had had syphilis, for he had been treated for it a number of years before. Another point in the case which makes it presumably a case of syphilis is the fact that under bichloride of mercury and iodide of potassium treatment, she has improved wonderfully.

Macerated Fœtus.

Dr. J. C. HOAG: Some time ago I read a paper before this Society on the subject of "Macerated Fœtus" in which I detailed a case that had come under my observation, where a woman had given birth to three such fœtuses. The case is one which interested me a great deal, and I have had the patient under observation since. I had no thought of presenting it to-night, but it was brought to my mind by the general subject of diseases of the placenta. I attended this same patient again last April, when she gave birth to her *fourth* macerated fœtus. Meanwhile she had been under treatment to some extent. I saw her only at long intervals, and she had been given iodide of potassium and a small amount of mercurials. I have not been able to detect any syphilis in the family, but whether owing to the treatment or not, she carried this fœtus a month longer than any of the others, and the fœtus when born represented a development of seven and one-half months. I shall still watch this case with interest, and perhaps shall be able to get some more macerated fœtuses.

GLASGOW MEDICAL JOURNAL.

*On two cases of Severe Vomiting in the later months of Pregnancy, associated with (so called) Hemi-albumosuria, and, in one, Diaceturia; with remarks on similar states of the Urine, in other Diseases.** BY ROBERT KIRK, M.D. Edin., F.F.P. and S., Glasgow; Physician to the Dispensary for Diseases of Women, Western Infirmary, Glasgow.

MR. PRESIDENT and GENTLEMEN,—As far as I am aware, neither of the conditions of the urine to which I wish to direct your attention to-night has been hitherto observed in connection with the vomiting of pregnancy.

The first case is also of interest from its being a striking instance of that pigmentation of the skin so often seen in slighter forms in pregnancy. The patient, a well developed and otherwise healthy woman, in very poor circumstances and in the sixth month of her eighth pregnancy, first came under my notice on 5th October, 1889. According to her account, she had suffered from severe and frequent headaches for two months previously, but it was not more than three weeks ago that excessive sickness and vomiting had supervened. She said that she caught a cold about this time, which produced symptoms of coryza, a feeling of cold in the back, with frequent and painful micturition, followed in a day or two by nausea and vomiting. For the last fortnight scarcely anything had stayed down; and she had been harassed with vomiting at all hours of the day and night, and been obliged to keep her bed. For the last three weeks she had slept very badly, scarcely getting any sleep at all some nights, and had had frequent headaches and giddiness. Bowels rather constipated; troubled with acidity and heartburn; had had a slight tickling cough for a few days past; had sometimes felt palpitation; had suffered from weakness and breathlessness,

* Read before the Obstetrical and Gynæcological Society of Glasgow, 26th March, 1890.

with great disinclination for exertion. From her account, she appears to have noticed her skin to become pigmented before this final pregnancy occurred. She stated that a miscarriage at the third month had preceded this last conception by a month, and it was before the expiry of this month that she observed her face and hands become yellow; while yellow spots appeared on various parts at the same time. The colouration first appeared in spots on the back of the hands and exposed parts of the forearms, and these coalesced to form large irregular patches; but it invaded the skin of the face in a more uniform manner. Two months after these parts had become thus darkened in colour, she observed dark spots on the front of the thighs, which soon extended to the iliac regions, and finally round the loins.

On first visiting her I found the tongue furred; P., 104; T., normal; no acceleration of the breathing. The face was of a nearly uniform dusky yellow colour, which was somewhat deepest just over the cheek bones. This duskiness, as has generally been observed in such cases, terminated very abruptly at the margin of the roots of the hair, under which the skin was by comparison quite pale. The conjunctivæ were not noticeably yellow, and the colouration of the skin was not like that of jaundice. The exposed parts of the forearms and the backs of the hands were nearly covered with irregular dark patches, even deeper in hue than the skin of the face. Finally, a continuous band of the same pigmentation, irregular at the edges, and two or three inches broad, extended all round the loins, terminating on the front of the thighs and abdomen.

A specimen of the urine was obtained the same day, and found to be feebly acid; of sp. gr. 1.015; slightly turbid, but not purulent. Let me here state, once for all, that in further testing these urines for albumen and mucin, 10 cc. was the quantity taken, and a test tube three quarters of an inch in diameter was used. With heat, and from one to five drops of acetic acid, it gave a precipitate of albumen the size of a boy's marble, but a perfectly clear supernatant liquid was

never obtained, although the opalescence after filtering was but slight. Heat and picric acid gave an identical result with the former, but the cold acid produced only a slight haze in the urine, which did not become flocculent nor form a deposit, even after standing for hours. One cc. of cold acetic acid, on the other hand, gave a flocculent precipitate, very nearly as large as had been thrown down by heat. When this result with acetic acid was diluted with water, it did not become as clear as the specimen tested with the cold picric acid until eight volumes of the diluent had been added.

It was this discrepancy between the effects of cold acetic and picric acids that led me to test this urine for hemi-albumose. This may seem strange to many, for this body is precipitable by picric acid, and the failure of reaction in this case appeared rather to prove its absence. But, from previous experience in testing for proteids in the urine, I suspected that the large quantity of mucin (as I regarded it) which I had found this urine to contain might, with certain proportions of acid, yield the reaction of hemi-albumose with heat. It may here be stated that this urine came under examination in the course of a special and lengthy investigation which I had undertaken as to the distinction between albumen and mucin in the urine. This had already led me to the conclusion that the latter protean substance is frequently mistaken both for albumen and a trace of peptone, and I now for the first time conceived the possibility of the same body in sufficient quantity being convertible into hemi-albumose by heat and acid. I do not mean, however, to enter into the question of the differentiation of the albumens of the urine on the present occasion, but only intend to show that this urine contained what has been accepted by others as hemi-albumose.

The method of testing was the well-known one of adding a certain proportion of acid, and boiling. When to rather more than half an ounce of this urine in a wide test tube, a few drops (four or five) of strong sulphuric, or other mineral acid, were added gradually a considerable flocculent precipi-

tate fell, which entirely disappeared below the boiling point with the exception of a faint turbidity, and reappeared in the flaky form on again cooling. There could be no doubt that this body was hemi-albumose; the only question was whether it had pre-existed as such in the urine, and had not been formed by the acid and heat from some other body? If the latter, it could not be from albumen, as the quantity of acid here employed would invariably form a soluble acid albumen with heat, not precipitable on cooling. Besides, as I determined by nitric acid and dilution, the urine did not contain sufficient albumen to yield this large precipitate, whilst it was estimated that there was four times more mucin than albumen present. My opinion was, that this mucin was convertible into hemi-albumose, just as albumen is; the only difference being in the different quantities of acid required to do this with the several substances. The body thus produced was capable of further conversion into acid albumen by prolonged action of the acid, for after repeated boiling and cooling it was found no longer to give a precipitate in the cold. This solution now gave a large precipitate with picric acid in the cold; hence it may be asked, if this acid albumen had been produced from what was serum-albumen or hemi-albumose in the first instance, why had this reagent failed to throw down this same precipitate in the urine? It may be added that the precipitate obtained with heat and careful acidulation with acetic acid, consisted of both the albumen and mucin (or hemi-albumose) present, and that the filtrate from these gave no hemi-albumose reaction. I need hardly remark that the sulphuric acid required to be added cautiously to the urine, as the precipitated mucin was readily soluble in excess. The urine was found to give the same reaction for several days afterwards.

On the following day the urine of twenty-four hours was carefully collected and found to amount to 18 ozs. of sp. gr. 1.017. I intended to estimate the urea in this sample, but unfortunately did not find the opportunity, although it is plain it must have been much below normal.

I think it is not improbable that aceto-acetic (or diacetic) acid, of which more remains to be said in my second case, may have been present in this urine also, but as I did not test for it till the patient was taking sodium salicylate, which gives a deep red colour with ferric chloride, not to be distinguished from that given with the same reagent by the above named acid, I cannot positively say so. The urine was several times examined for tube casts, but none were found.

The treatment of this case consisted in the administration of Nestlé's Milk Food, and for the first two days, of five-grain doses of chloral every four hours—a remedy which I have often found to act very beneficially in various forms of albuminuria. Two days afterwards, however, the small quantity of urine excreted induced me to prescribe sodium salicylate, with the view of stimulating the hepatic functions, and increasing the elimination of urea. On the same day a sample of the urine was again tested, and I found the albumen and mucin so much diminished that I would have continued the chloral had I done this testing beforehand. The patient, however, continued to make equally satisfactory progress on the salicylate, and within a week the albuminuria had ceased, the quantity of urine passed had risen to nearly normal, and the patient could take and retain a fair amount of food. She continued well till the full term, when she was delivered of a healthy, well developed child. I saw her a week ago, and the chloasma had decreased on the face, and almost entirely disappeared from the forearms, but she said it was still marked round the loins. She enjoys good health, and can suckle her child.

CASE II.—Mrs. B., æt. thirty-four, was first seen on 30th October, 1889, when she was in the sixth month of her ninth pregnancy. She had generally enjoyed good health, but had suffered from an inflammation of the left lung two years ago when suckling, which confined her six weeks to bed, and from which she did not fully recover for a month longer. For a period of two or three days during this illness she had vomited incessantly. Throughout the present pregnancy.

except the first month, she had suffered from morning sickness and vomiting, which seemed to surprise her, as she had been remarkably free from these troubles in all previous pregnancies. In July last she had been very bad, and on the point of calling a doctor; at that time she suffered much from thirst and frequent micturition, passing urine in small dribbles, with heat and irritation, and often highly coloured. On Saturday last (four days before my visit) she had been very thirsty all day, and drank water freely, but all was rejected by vomiting. Since that time she had vomited frequently, and at all hours of the day. From her description, it appeared that everything, even water, was rejected instantly, and apparently before it had gone further than the pharynx, by a convulsive movement. Nothing had stayed down for the last four days. On Saturday she had experienced a cold "creepy" feeling, and her nose "ran." On the previous day she had washed the stair, got heated, and believes she caught cold afterwards. She has been breathless during the whole of this pregnancy and could, with difficulty come up-stairs, and has also suffered frequently from palpitation, which she described as a "beating and knocking" at the heart. The vomited matters have a sour taste; she is not thirsty; has not been habitually constipated, generally having an evacuation twice a day. Says her urine has been very scanty, and that to-day she has only passed half a tumblerful since morning (it is now 4.30 p.m.). Two days ago she took some castor oil, which caused a feeling of disgust, and after that she first noticed that her urine had a jaundiced appearance.

On examination, the skin and the conjunctivæ presented a decided, but not deep, jaundiced tint. Tongue coated; rather pale. Dry râles heard extensively over the chest, anteriorly and posteriorly; no dulness anywhere on percussion. Heart's action quick and forcible; no murmur heard. Hepatic dulness normal. Pulse, 124; respiration, 24; temperature, 99.4°.

31st October.—To-day it was further elicited that she had slept none since the attack on Saturday, having had a wild

feeling of excitement about the head, apparently caused by a convulsive action (singultus) proceeding upwards from the chest, and which rendered sleep impossible. She experienced a peculiar respiratory distress, and could not lie down from a feeling of impending suffocation. She had vomited very badly this forenoon, the ejected matters having a bilious appearance. The bowels had moved twice with rhubarb pills. Pulse, 120; temperature, 99° Fahr.

During these last two, and the two following days, the treatment consisted in relieving the bowels by pills, and subsequently, in subduing convulsive movements by small doses of morphia, for, until this was done, it was found impossible for her to retain any other medicine. On 1st November she vomited severely in the forenoon, but had slept some for the first time on the previous night, and had retained a little beef tea, and milk and soda water. She breathed more easily, and the temperature had fallen to normal, and there were fewer râles to be heard over the chest. On the 3rd when it was found she could retain it, a mixture, containing five grains of chloral and one drop of liq. glonoine, was prescribed.

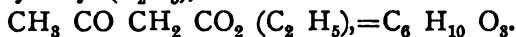
The following are the principal points in regard to the state of the urine to which I wish to direct your attention:—A specimen obtained on the evening of the 30th October was distinctly icteric, containing bile acids and pigments; had a slight mucinous turbidity; of marked acidity; sp. gr., 1.021. Passing over the tests which proved, in my opinion, that it contained only a small and even doubtful trace of albumen but a sufficient quantity of mucin to give the hemi-albumose reaction, let me proceed at once to the latter point, for the testing in this case showed a possible source of fallacy which perhaps has not hitherto been pointed out. The few drops of sulphuric acid produced an instantaneous and bulky precipitate, filling the entire volume of liquid in the tube. This was easily found to consist largely of urates, as well as the precipitated mucin; the distinction being readily made by the lower temperature at which the former disappeared on heating

as compared with the latter. Obviously, however, had the precipitate consisted of urates alone, a mistake might readily have been made had this point been overlooked. In such cases a good plan would be to heat to a point at which the urates could not be precipitated before adding the acid. The hemi-albumose reaction was obtained in a marked form until the 3rd November, but on the 4th it is described as being not very perfect, or even doubtful, and the quantity of mucin in the urine was now much reduced.

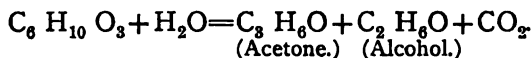
The first specimen of this urine treated by ferric chloride (and before the patient was taking any sort of medicine) gave such a deep red colour with this reagent that the liquid required dilution with six volumes of water before it became even translucent. As you are all aware, this reaction is now relied on as proving the presence of aceto-acetic (or diacetic) acid in the urine, provided the patient is taking no medicine which might strike a similar colour with the reagent. Of such drugs, Legal has mentioned thalline, antipyrine, salicylic acid and phenal; while to these Le Nobel has added, β -oxybutyric acid, thiocyanates, and acetic and formic acid compounds.¹ To these might be added iodide of potassium which gives a red colour with the reagent, and perhaps a good many other drugs. The question of the occurrence of this body, and of acetone, into which it is readily decomposed in the blood and urine, is an interesting one, and one about which there probably remains a good deal to be learned. When this case came under my notice I had not much experimental knowledge of the subject, and in view of the numerous tests proposed for acetone in the urine, and the confusing and contradictory statements of different writers in regard to these bodies, I thought it wise to limit my observations mainly to the ferric chloride reaction, said to indicate the presence of diacetic acid. Besides, if the acetone in the urine be derived from this acid, diaceturia is the more important condition, generally implying also the existence of acetonuria.

¹ Quoted from MacMunn's *Clinical Chemistry of the Urine*, p. 197.

According to Roscoe and Schorlemmer,¹ aceto-acetic (or diacetic) acid has the formula $\text{CH}_3 \cdot \text{CO} \cdot \text{CH}_2 \cdot \text{CO}_2\text{H}$, and is not known in the free state. Ethers of it are, however, known, and the body we have to consider is one of these—viz., ethyl acetacetate, or diacetate (called by some ethyl-diacetic acid), in which the atom of H in the CO_2H group is replaced by ethyl (C_2H_5), thus:—



Another point which it is important to bear in mind is, that under the influence of strong acids and alkalies, and by taking to itself one molecule of water, this body may be split up into acetone and alcohol:—



According to my experience, colour reactions are never very delicate, and are often liable to fallacies. Thus, in the present instance, the colour which ferric chloride gives in the urines under consideration is, as far as I have observed, a red, brownish purplish in its deeper tints; whilst Roscoe and Schorlemmer state that the same reagent strikes a *violet* colour with ethyldiacetate as chemically prepared. And here it may be mentioned that some have denied that the ferric chloride reaction in the urine is due to diacetic acid, but is caused by some body still unknown. However this may be, there can be no doubt that it indicates at least an abnormal condition, and one generally connected with grave constitutional states. In these circumstances, it behoves us to state accurately the facts observed, leaving explanations, if such are not yet forthcoming, to future research.

This urine, then, gave a distinct ferric chloride reaction for six days, being pronounced on 4th November, and failing to appear next day. Two days after it was first observed, when the colour produced with the reagent was still deep, but less than at first, some of the urine was acidulated with hydrochloric acid and distilled over, the liquid being allowed to

¹ *Treatise on Chemistry*. Vol. iii. Part II. Organic Chemistry p. 172.

come to the boiling point, and the distillate gave the same reaction beautifully. I was surprised at this, as it is stated in Neubauer and Vogel "On the Urine,"¹ that acetic acid ether (ethyl-diacetic acid) has never yet been separated from the urine, either by distillation or extraction with ether. I can only account for the result in my case by supposing that it existed in very large quantity in the urine, and therefore was not all decomposed into alcohol and acetone; but that a sufficient quantity to give a distinct reaction came over unchanged. The colour obtained in this distillate was purplish becoming red on boiling, and finally brownish. And here a few remarks might be made on the effect of heat on the colour produced by ferric chloride. It is said that it disappears with heat, and after standing some time; but I found it so variable in these respects that I was for a time very much puzzled. After a good many observations in different cases, it appeared that it only disappeared on boiling if a quantity of ferric chloride insufficient to produce the maximum effect had been used, and that with a sufficient quantity or an excess it did not do so, or at least, not immediately nor perfectly. I generally found, when the colour was discharged at a boiling temperature, that the further addition of the reagent restored it, and that at last a point was reached when it was not quite destroyed by heat. At the same time, it should be stated that the colour in some of these cases might be due to the further production of a dark precipitate, for the liquid was sometimes quite pale after filtering. Owing to this second precipitate forming, the colour seemed sometimes to increase rather than diminish on boiling.

Incidentally, although it is somewhat of a digression, I am tempted to mention an effect produced by ferric chloride, not only in this, but in all urines, which I think has not been previously noticed. When added to the urine a bulky precipitate falls, containing phosphates; but I have seen no reference to the fact that the chloride itself is decomposed, being

¹ Eighth edition, part i., p. 187.

partly reduced, no doubt, to ferrous chloride, as happens when it is used to deodorize sewage ;¹ while it would also appear from the colour of the precipitate, that some hydrated peroxide is thrown down. But the point to which I wish to draw special attention is this, that at the same time there is developed in the urine a wonderful degree of viscosity, so that the precipitated phosphates can scarcely be filtered away. I had long observed this before it occurred to me to try the frothing power of the fluid after adding ferric chloride, and to my surprise I found, on doing so, that the urine now frothed as well as any albuminous urine I had ever tried. This did not depend on the precipitate, as the property was retained after filtering this away. It was destroyed by boiling, and by a mineral acid, but in the latter case was restored by alkali. To what was this remarkable phenomenon due? Not to the presence of the colloid body, the hydrated peroxide, for I found that when this was thrown down, either by adding alkali or by dialysis (as was first done by Graham), no frothing power was developed. It could only be caused, therefore, by an action on some of the organic matters, probably on some of the extractives. At first it appeared probable that mucin was the body whose frothing power and viscosity were thus so greatly increased. But this supposition was negatived by the fact that on dialysing the urine (after which most of this body was retained), the effect of ferric chloride was much diminished, and by the fact that the reagent had no effect at all on the frothing power of bile. Although this phenomenon did not directly depend on the peroxide of iron, it seemed, nevertheless, to be essentially connected with the production of this substance, and this perhaps explained why the effect was again lost by adding a mineral acid, by which the oxide was again converted into chloride, sulphate, &c.

This observation seems not without interest as bearing on the local action of styptics. The effect of ferric chloride,

¹ *Miller's Chemistry*, part ii., Inorganic. P. 643.

lead acetate and alum, is generally attributed simply to their power of coagulating albumen. I believe that ferric chloride and alum at least have an influence of quite a different kind, and which has not been recognised. A precipitate or coagulum of albumen has often less power of arresting the filtration of a liquid than that which is exercised by a small quantity of mucin in solution. Every one must have observed that when an albuminous urine on boiling gets into a sort of gelatinous form (for want of proper acidulation), it is more viscid and difficult to filter than if the albumen had all been perfectly coagulated. It is to the production of viscosity, therefore, whether in the coagulated albumen or in the liquid, that the styptic effect of ferric chloride and alum is mainly due. The latter has a similar effect on the urine to the former, and I have found that the frothing power of all forms of albumen and peptone is increased by them. When we further consider that they can communicate this property to normal urine, which otherwise is almost destitute of it, we readily see the importance of this fact in explaining their action. This also explains why preparations of ferric chloride containing too much free hydrochloric acid are inferior as styptics; its presence, of course, preventing the deposition of the hydrated peroxide, and the consequent effect on the organic matters. This does not seem to be generally known, for although Squire says that by evaporating down the liquor ferri perchlor. to half its bulk, we get rid of much of the free acid, and thus obtain a better styptic, I find that such a preparation is not to be obtained from the Apothecaries' Hall here, and I suppose few, if any, surgeons make it for themselves.

Owing to the administration of purgatives at the beginning of this case, and the great distress of the patient, the total daily quantity of urine passed was not obtained till the 6th November, when, however, the ferric chloride reaction was still distinct, but could not be got after distillation. The patient had been taking chloral and nitro-glycerine for three days, and although she had vomited several times on the

morning of the previous day, was a good deal better. The urine of twenty-four hours (from 5th to 6th) amounted to thirty-six ounces, and is thus described in my notes:—Turbid; jaundiced tint; putrid, peculiar odour; of faint acidity; sp. gr. 1.014; ferric chloride reaction marked (colour disappearing with heat when an excess of the reagent was not used); mucin only in small quantity, and hemi-albumose reaction gone. Urea (estimated by the ureometer at 65° F.=1.04 per cent., or 164.736 grains daily. A second trial gave 1.06 per cent., or 167.9 grains daily. On the 8th the patient was ordered five grains of sodium salicylate four times a day, and a sample of urine obtained on the 10th contained 1.72 per cent. of urea. If any inference had been drawn from this, however, as to the total excretion in twenty-four hours, it would have been utterly fallacious, for the twenty-four hours' urine from 12th to 13th being collected, amounted only to thirty-eight and a-half ounces; sp. gr. 1.013; urea, only 1 per cent.; total, 171.6 grains daily. At the same time I found, on inquiry, that the patient (partly from her poverty) had been taking her medicine very irregularly, and after furnishing her with a free supply, which she took regularly for a week, the urea was again estimated. The twenty-four hours' urine on this occasion was thirty ounces; sp. gr. 1.017; urea=1.4 per cent., or 184 grains daily. Hence, there was but slight increase under the salicylate, and perhaps a larger dose might have been given; while it will be observed that the percentage was less than the specific gravity would have led us to expect. I have only to add that no glucose was found in the urine in either of the above cases, and that no tube casts were seen in the deposit, although search was made for them several times.

The improvement in the last patient was much less complete and satisfactory than in the first. Nevertheless, in little more than eight days all the worst symptoms—the singultus, sleeplessness, excitement, and embarrassed respiration had disappeared, and the patient went on to the full term, although suffering all the time from morning sickness, and

often vomiting. Seen about a week ago (six weeks after delivery) she stated that her health was still but indifferent, and that she was liable to faintness and sickness, but had never actual vomiting. The child was stillborn, but she said it was the largest she had ever had, and that foetal movements were quite vigorous before labour set in. The pains were not of the ordinary kind; she had a constant pressing and pain in the back; felt often very faint; and the expulsion of the placenta was accompanied with numerous large clots. Apparently the death of the foetus was caused by premature separation of the placenta, and internal antepartum hæmorrhage.

The references to be found in our standard text-books to the state of the urine in the severe vomiting which sometimes supervenes in the later months of pregnancy are both meagre and unsatisfactory. Barnes does much better justice to the subject than any other author I have read, and gives prominence to its connection with albuminuria (as first pointed out by Sir James Simpson); with diminished excretion of urea; with alcoholism; but more especially with various other forms of blood-poisoning. I have not been able to find, however, any reference to the occurrence of hemi-albumose or of ethyl-diacetic acid in the urine in this serious condition. Obviously, if this form of vomiting be connected with some special variety of albuminuria, it becomes important to determine this, for it is quite common to meet with cases of acute nephritis, attended with copious albuminuria and dropsy, but without any sickness or vomiting whatever. As I have already said, the body which gave the hemi-albumose reactions was mucin, for I do not know a single reaction to distinguish it from the same substance as found in normal urine. I feel certain it is the very same body which Dr. Pavy describes as a form of albumen precipitable by an organic acid in the cold, and so often found in functional albuminuria. Given its occurrence in any case in sufficient quantity to yield a flocculent precipitate with acetic acid, and I believe it will always be found to give also the hemi-albumose reaction if

tested as above. Evidently, unless so tested, it may pass for ordinary albumen, as it gives a flaky precipitate with heat and proper acidulation, after the removal of which no hemi-albumose reaction can be obtained.

The appearance of hemi-albumose in the urine has been generally attributed to interference with the cutaneous functions. An observation which I made, however, in a case of jaundice from obstruction, showed very conclusively that it may be the direct and immediate consequence of hepatic disturbance.¹ In this case, after the first severe symptoms had subsided, and when the jaundice was but moderate in degree, the urine was found to contain but a trace of albumen, and a quantity of mucin insufficient to give the hemi-albumose reaction; and, further, to be quite free from tube-casts. Suddenly acute symptoms of obstruction again set in, the biliary colic requiring an instant, but only one, dose of morphia (about 30 mins. liq. morph. hydrochlor.). In a few hours the jaundiced tint of the skin and urine was trebled in intensity, and the first stool afterwards was clay coloured. The urine was now literally loaded with tube-casts, gave a large precipitate with acetic acid, and yielded the hemi-albumose reaction in the most perfect manner. In a few days, as the jaundice diminished, the hemi-albumose and tube-casts disappeared from the urine. How reasonable to suppose, therefore, that hepatic disturbance may have been the starting-point in the production of the same phenomenon in the above two cases also?

As already remarked, I am inclined to believe that diaceturia existed in the first of these cases as well as the second. What was the relationship between these two conditions of the urine, and what the connection of either with the excessive sickness and vomiting? The symptoms in the second case above recorded are remarkably like those of the initial stage of diabetic coma in its commonest form, as described by Dr.

¹ I do not know whether hemi-albumosuria has been previously noticed in jaundice, and it is not mentioned in the last edition (8th) of Neubauer and Vogel.

Dreschfeld;¹ prominent among these being nausea, vomiting, excitement, and embarrassed respiration. Vomiting seems to be a very constant symptom when diaceturia exists. Dr. Churton has published such a case, in which the probable diagnosis was jaundice from impacted gall-stone.² This being the first recorded case of the kind, the question arose did the diaceturia depend on some affection of the nervous system resembling that of late diabetes, and was an exploratory operation, therefore, contra-indicated? No operation was attempted; the patient gradually sank and died, and no *post-mortem* was obtained. A case lately under my care, in which jaundice from obstruction was accompanied with diaceturia, throws an interesting light on this question. This patient, a female, æt. fifty-six, was jaundiced for ten weeks, during which she passed numerous gall-stones, and throughout this period the urine gave the characteristic colour with ferric chloride, while on distilling after acidulation with hydrochloric acid, the iodoform reaction was readily obtained with caustic potash and iodine, indicating the presence of the decomposition products of diacetic acid—viz., acetone and alcohol. This patient is now quite well, and in her case it is clear that the diaceturia depended solely on the perverted action of the liver cells resulting from the obstruction.

Strange as it may seem, hemi-albumose never appeared in the urine in this case, although the mucin was in slightly more than normal quantity, and accompanied with a trace of albumen; while in the other case already mentioned, in which hemi-albumosuria existed, there was never diaceturia. Both patients suffered from occasional sickness and vomiting, but these symptoms were least marked in the subject of diaceturia, and her general condition was seldom one of great distress.

Hemi-albumose (or propeptone, as it is otherwise called) has been discovered in the urine in osteomalacia, abscess of the liver, septicæmia, hip disease, peritonitis, endocarditis, parametritis, spinal curvature, Bright's disease, the puerperal

¹ "Bradshawe Lecture," *Brit. Med. Journ.*, 21st August, 1886, p. 358.

² *Brit. Med. Journ.*, 6th November, 1886, p. 855.

state, and lately by Dr. Loeb, of Frankfort, in measles. Dr. Saundby gives the following summary of the cases in which the ferric chloride reaction has been obtained in the urine :— Measles, scarlatina, pneumonia, cancer, Bright's disease, perityphlitis, diabetes, sulphuric acid poisoning, strangulated hernia, and after surgical operations.¹ From a comparison of these two categories, it appears that hemi-albumose and diacetic acid often occur in the urine in the same class of cases; nevertheless, I am not aware whether their co-existence in the same individual case has been previously observed, although I believe such a coincidence must be comparatively common. One or other condition of the urine, or both together, must also be of frequent occurrence in pregnancy, and in different forms of jaundice. I found both to exist, for instance, in a case of jaundice from functional disturbance in a girl of twelve, and who recovered within a fortnight, and also in a case of pleurisy in the sixth month of pregnancy. I have further observed that mucin is almost invariably found in abnormal quantity in the albuminuria of pregnancy (excepting, perhaps, in cases of actual nephritis), although not always in quantity sufficient to give a distinct hemi-albumose reaction. It is evident that a careful examination of the urine for these conditions is of the utmost importance in these cases, and may afford the clue to their successful treatment. The administration of purgatives, diuretics, and hepatic stimulants in the above cases seems to have been fairly successful, and I may express the hope that the peep which I have asked you to take at them through renal spectacles has not been without interest for you.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL
SOCIETY.

Electro-Therapy and Surgery in Gynæcology. By GEORGE
J. ENGELMANN, M.D., St. Louis.

Within the last two years, since the reading of my first paper on this subject at the Baltimore meeting of this

¹ *Birmingham Med. Rev.*, Feb., 1885 (quoted from MacMunn, p. 197).

Society the general interest in gynæcological electro-therapy has constantly increased, and many have resorted to the use of the current in gynæcological practice; but I fear that much disappointment has been experienced, as too much has been claimed by enthusiastic advocates, so that those who hastily endeavoured to utilize the new remedy have been more or less disappointed, and now rashly condemn it. But they have failed, not because the agent is an impotent one, but because it is as yet too often applied with imperfect apparatus, and indiscriminately, without a strict knowledge of the conditions under which it might be effectually used. The agent is applied at random, with a vague hope of success, without reference to properly formulated indications, based upon pathological considerations by which the practitioner justifies the administration of other remedies.

For myself, I will say that the new remedy has proven all that we might reasonably expect. I am thoroughly satisfied; although I have not been able to achieve results so brilliant, in all cases of large uterine tumours, as those claimed by Apostoli, by the Keiths, or by my respected colleague, Dr. Baker, this very failure has served me to gain a more thorough knowledge of the agent; all such tumours are not fit subjects for this treatment—and I now thoroughly appreciate the cause of my failures—failures to cure, not failures to relieve; failures, if you may so call them, which are due to the structure of the growth in the individual case. In former years, I, myself, have applied the current, as most operators still do, indiscriminately, in such cases of uterine tumour as were either inoperable or refused operation. Thus, I fell into the common error of indiscriminate electro-therapy, and, of course, treated many cases in which reduction was simply impossible. By apparently peculiar variation of failure and success I was taught to discriminate, and soon saw that this remedy, like all others, must be selected for the individual case.

Hitherto we have been groping in the dark; the treat-

ment has been applied without indications other than the convenience of patient or practitioner, to fibroid, myoma, or sarcoma, intramural or subperitoneal, in rapid growth or in cystic degeneration; hence the variety and vagueness of reports, an evidence of the uncertain status of electro-therapy, which must persist until the present wide field of application is defined and limited, and the practitioner proceeds, as with other methods, only after a thorough sifting of the case, and the determination not to resort to the treatment until correct indications can be established. With increased experience and discrimination the record constantly improves, and the good results which I have obtained of late under rather unfavourable circumstances afford most satisfactory evidence of the value of the electric current as a therapeutic agent.

During a long period of painful inactivity away from home, I have been enabled, by the courtesy of foreign *confrères*, who kindly placed at my disposal suitable cases, to verify many of the results previously obtained; although with imperfect and hastily collected apparatus I was called upon to treat patients carefully observed by most sceptical eyes, and frequently patients upon whom other methods had failed, I am well satisfied with the results.

In the present unsettled state of gynæcological electro-therapy, I trust that I may be pardoned these brief general observations before entering more directly upon the field which I have outlined for this paper; surgical electro-therapy, or the application of galvanism in cases of a surgical nature. Whilst in gynæcological electro-therapy we may utilize faradic, galvanic, and possibly static electricity, I will speak of galvanism only, and of galvanism in cases which must of necessity become surgical unless relieved by this method.

I have confined this paper to the application of electricity in surgical cases, not because the therapeutic results of galvanism, either as a main factor or as an adjuvant in the treatment, are less striking or less desirable, but because I

believe that it is well in this era of venturesome antiseptic surgery, with its brilliant achievements, to demonstrate the possibility of attaining similar results by less violent and less dangerous methods. If, for the sake of brevity I speak of surgical electro-therapy, I refer to the application of the treatment in cases of a surgical nature. But let it be well understood that I do not, in all cases, propose the electric current as a substitute for the knife. I am, myself, a strong advocate of surgical gynæcology, and yet I would urge the claims of the current most earnestly in a certain class of cases and under certain circumstances. Some cases are peculiarly suitable for this treatment, and can be so rapidly relieved—cured—that the most enthusiastic surgeon will not deny the advantages of so apparently harmless a remedy over the bloody operation; in other instances in which surgical interference would appear indicated, peculiar circumstances may necessitate a resort to this violent method. If the consent of the patient be refused for surgical interference, if it is impossible for her to have the necessary attention, or if her duties do not admit of confinement, relief should be attempted by the current: operation is out of the question, and electro-therapy must be resorted to. Nothing is lost by this first resort to electricity in proper cases; even should it result in failure, the suffering of the patient will be allayed, her general condition improved, and surgery invariably remains, with the prospects for a successful operation improved. The surgeon, as a rule, will yield most unwillingly to electro-therapy, as the *eclat* of an operation is lost: no anæsthesia is given; neither nurses nor assistants are summoned; a tumour reduced, or checked in growth, the functions restored, a dysmenorrhœa, or even an hæmatocele, or pelvic infiltration cured by so simple a method as the holding of the electrodes for a few minutes, with scarce any inconvenience to the patient, brings but little glory to the surgeon. In his office, without much display, he will often accomplish results as striking as those hitherto attained by more effective surgical procedures. It is a simple, modest proceeding, with frequently striking

results; the patient may often be treated in the office as she would for a simple endocervicitis, or some minor displacement; life is not endangered, and yet the success, perhaps more slow, is, in proper cases, as certain as it is to the surgeon.

Relative Merits of Surgical and Electrical Treatment in Cases Admitting of Comparison.—A. Advantages of electro-therapy.

First. Safety of the method is in its favour with physicians and laymen; danger even in cases of deep puncture may almost be precluded, and with proper antisepsis and correct methods no serious consequences of any kind are to be dreaded. The necessary precautions are, moreover, so simple that they may be observed by every careful practitioner; whilst the dangers of surgery vary greatly with the experience of the operator.

Second. The patient is not confined to bed; the continued well-being of the patient, who is usually able to continue her daily vocation, is important to many; rarely after a first application is she confined to bed, and then as a precautionary measure; hence, this is often the only possible method of treatment to which the working woman is willing or able to submit.

Third. Its compatibility with all other methods of treatment; and that in case of failure but little is lost, as the patient will at least be in a more satisfactory condition for surgical treatment.

Fourth. Sometimes there is an advantage in this proceeding, in the avoidance of that nervous excitement so frequently caused by the thought of a surgical operation.

B. The pathological conditions which admit of treatment by galvanism, and in which I would advocate the resort to electro-therapy, with reliance upon surgery in case of failure, are in the main:—(1) *inflammatory products* which admit of restitution, and (2) such *neoplasms* as offer probabilities of healthy retrograde metamorphosis.

However broad this statement, it is a foundation upon

which the indications for the treatment may be based ; the crude outline of the map, as was so well stated by my venerable friend, Dr. Grailey Hewitt, into which the details will be marked by progressive observers. As has already been stated, the cases favourable for this treatment are those in which it is possible to obtain restitution by a process of retrograde metamorphosis ; those in which the electrolytic action of the current or the direct chemical effect of the pole may be utilized : indurations, inflammatory deposits, the results of interstitial inflammation, and certain neoplasms, deep-seated tumours which admit of healthy retrograde metamorphosis, and superficial growths which can be subjected to the direct chemical action of the pole. Such are the results of inflammation of the uterine and circumuterine tissues, induration and enlargement of the uterus by chronic metritis, stricture, stenosis, deposits in the cellular tissue, para- and perimetritis, fibroids, and myomata, especially intramural and submucous, before they have entered upon the process of disintegration ; polypi, caruncles, and hæmorrhoids ; whilst the necessity for the removal of the tubes and ovaries may in some cases be avoided by the proper use of the electric current, I will not compare the results of electro-therapy in such cases with the results of operative interference, as the proper indications for both vary so much with each individual case ; I will only say to those who advocate oöphorectomy for nervous disturbance with but slight pathological changes in the part, that a trial at least be given this treatment before resorting to operative procedures. Of extra-uterine pregnancy I will likewise say but little, as I believe that surgical and electrical treatment each have their distinct indications, not, as in other cases, admitting of a choice in accordance with surrounding circumstances.

Before entering upon the consideration of individual cases, I will repeat, as I do not desire to be misunderstood, that I do not unqualifiedly urge electro-therapy in the class of cases now under discussion, as a substitute for surgical interference, but as a method to be held in view as feasible and proper to

be resorted to under special circumstances, if the condition of the patient or her surroundings should make the method preferable. We shall soon be better able to formulate our indications; for the present we can say only that if the above pathological conditions exist, we may resort to electro-therapy with good hopes of success.

I.—*Chronic Inflammatory Conditions.* These are:—

(a) *In the uterine tissues:*—(1) Stenosis, stricture, cicatricial contraction of the uterine canal; (2) several forms of endometritis, interstitial and fungous, and (3) the enlarged, indurated uterus, produced by chronic metritis.

(b) *The results of inflammatory conditions in the circum-uterine tissues:*—(1) Suppurative forms of perimetritis; (2) the solid exudates.

(a) *Inflammatory Products in the Uterine Tissues:*—(1) *Stenosis and stricture by induration of the walls and cicatricial contraction of the canal.*—The surgical treatment of these cases, and that with which I would here contrast electro-therapy, is dilatation, rapid and slow, and excision, and, in the majority of cases, I give decided preference to the simple, harmless, and in this instance more rapid method of treatment by the galvanic current, especially if they be accompanied by induration of the uterine tissue; the treatment is less painful than even that of gradual dilatation; it is as rapid as that of excision, and preferable in every way to the brutal method of rapid dilatation, unless undertaken for the object of producing an abnormally wide canal preparatory to the introduction of other instruments for operative purposes. Extreme cases of cicatricial narrowing, in which it would be impossible to insert even the most slender dilator, can be overcome readily and rapidly by this method without pain or anæsthesia. But it is only for the purpose of establishing normal apertures to afford the necessary exit for retained fluids and to relieve the pains of a dysmenorrhœa. Actual dilatation of the uterine canal beyond its natural limits for the purpose of examination or operation, the introduction of finger or instruments, must be accomplished by

the knife or the dilator. By the method proposed the stenosis or cicatricial contraction is overcome, first, by the direct destruction of the cicatrized or indurated tissues, by the cauterizing action of the conical metallic pole; and, secondly, by the absorption of the indurated tissues in the surrounding uterine walls, which is effected by the electrolytic action of the current.

The advantages of the method are that it can be practised in the consulting room; that no anæsthesia is necessary; that the tissues which cause the narrowing are destroyed, the surrounding induration eliminated, and a healthy condition of the tissues approximated, so that a return of the narrowing is not to be feared, as it is after incision and certainly after moderate dilatation.

The effect upon the uterine nerves is of the greatest importance, and I believe that the relief of the dysmenorrhœal pains, which is so easily attained by treatment of strictures by electro-cauterization, is due to this very fact, and not alone to the mechanical widening of the canal.

A most striking case of the kind I have cited in my first paper on gynæcological electro-therapy, in which the external os and lower portion of the cervical canal had been so narrowed by cicatricial contraction, the result of a nitrate of silver treatment, that only the most delicate surgical probe could be introduced, hence a dilator was out of the question. The first electrode inserted was a simple sewing needle, and by a gradual increase in the size of the instrument, I was enabled within a little over five minutes to introduce a small-sized uterine sound. A single treatment sufficed to relieve the symptoms, and a return of the condition is not to be dreaded. This was a case seen by many in my own clinic, but as the presence of critical observers adds to the value of the cases reported, I will also mention a case treated by myself before the Berlin Gynæcological Society in June last, for the purpose of demonstrating the truth of the facts claimed in my paper previously read before that Society. The patient was one kindly sent to me from the clinic of Dr.

Martin, who had been consulted on account of the intense pain which she suffered with each monthly return of her sickness. By the use of great force he had succeeded in passing a sound, but immediately upon its withdrawal the previous condition returned. The patient was brought before the Society, and with an electrode prepared for the purpose, I succeeded, within less than six minutes, in widening the canal sufficiently to admit of the passage of an ordinary sound; a current of 120 milliampères was used, with a medium-sized electrode upon the abdomen. No undue pain was caused, and the next menstrual period, some five days later, passed without the previous suffering. A number of applications were made after this time for the purpose of widening the canal still more, so as to allow a large sound to pass easily, although I do not believe it would have been necessary permanently to secure the result obtained by the first treatment.

2. *Endometritis, with induration or polypoid development of the mucous membrane, interstitial and fungous endometritis.*—Cases of this kind, in which a speedy result can be obtained by surgical interference only, by the curette, can be relieved almost as rapidly by electro-cauterization with a metallic electrode as large as can be introduced, and currents of from 100 to 150 milliampères; the negative pole being used in more common forms of endometritis with induration, by which not alone the superficial layers of the diseased mucosa are destroyed, but an absorption is inaugurated in the surrounding tissues; the positive pole serving in the polypoid forms for the purpose of first overcoming the hæmorrhage which usually coexists.

This method is a most happy alternative in the outdoor departments, and for the treatment of patients who have the care of their homes and cannot be confined to bed, even for a few days. Under the most unfavourable circumstances, it is at least more satisfactory than any therapeutic measures which can be adopted, and should it fail, the curette can always be resorted to.

3. *Chronic metritis, hyperplasia uteri*, usually accompanied by endometritis and a certain amount of perimetritis, and uterine displacement, descensus of the enlarged uterus. These are cases which frequently resist even prolonged treatment, and which are successfully attacked, especially by German surgeons, by the so-called amputation of the cervix, the wedge-shaped excision; and in this country, if accompanied by laceration, by Emmet's operation; the most important result of this procedure being the retrograde metamorphosis, the absorption inaugurated by the surgical interference. A similar result can be attained by the electrical treatment, by electro-puncture, the use of a strong needle as negative pole, which is passed into the indurated tissues; if the endometritis is a leading feature, the electro-cauterization is first resorted to. In either case, currents of about 100 milliampères should be used. The process of absorption once inaugurated, faradism, with coils of low tension as a uterine massage will complete the cure.

(b) Products of Inflammation in the Circumuterine Tissues.

—We may compare the results of electro-therapy with surgery in two forms of this affection: the suppurative, and the solid exudate.

1. *Suppurative perimetritis*.—Suitable for this treatment are only such of the chronic forms of this affection which are accessible per vaginam and best so evacuated; this is merely a variation of the usual surgical procedure; the knife, the scissors, or dilators are replaced by the metallic electrode with the negative pole. I look upon the vagina as the most natural and satisfactory outlet for pelvic abscess originating in the circumuterine tissue, and I am entirely in accord with the methods now generally followed—for instance, that adopted by Goodell; but instead of entering with the blunt scissors or the steel dilator, I resort to a negative electro-puncture—that is, I penetrate into the sac with a metallic electrode in connection with the negative pole of the battery, or endeavour to follow the fistulous tract if this be found. An open pathway is thus established without hæmorrhage,

without the production of a raw, absorbing surface, and if an electrode of a sufficient size is used, there is no danger of contraction as in an opening produced by other methods. The trocar with the canula or even the dilator may be connected with the battery and used as a perforating electrode. Recent cases are best treated by free incision, with washing and drainage; but for old cases which have persisted for a length of time, with thickening of the walls and surrounding tissues, the opening by electro-puncture possesses the following advantages:—

First. These cases are often difficult to diagnose; the infiltration is evident, but the presence of pus doubtful; the abscess walls are thick and hard, and the circumuterine tissues infiltrated so that fluctuation cannot be detected. Under these circumstances electro-puncture per vaginam, with currents from 100 to 200 milliampères, is the correct diagnostic and therapeutic measure. If pus is found, the outlet is established. If suppuration does not exist, that fact has been positively determined and at the same time the most active measure at our command to overcome this most annoying condition has been resorted to, and the treatment must be continued.

Second. It is a safe method of dilatation. The extent of its action is fully under our control; raw surfaces are not produced, and vessels which by chance are opened are not liable to bleed, as they are closed by the accompanying cauterization, and besides, they are mostly in the softer tissue, and pressed aside.

Third. I advocate this method in chronic cases of long standing, which are invariably accompanied by induration of the surrounding tissues, and the same method by which the outlet is established serves most effectively to hasten the absorption of the inflammatory products. Whilst I deem the knife preferable in recent cases of suppurative perimetritis or pelvic abscess, and in those which can be treated by laparotomy only (salpingitis with its sequences), the opening by electro-cauterization has undoubted advantages in chronic

forms accompanied by induration which can be evacuated per vaginam. The method is precisely the same as that now in general use: free evacuation, drainage, and antiseptic washing; the knife, the blunt scissors, or the dilator being replaced by the negative pole of the battery. It is, perhaps, immaterial in what way the pus is evacuated if free discharge is obtained, but electro-therapy is the only method upon which we can rely to accomplish absorption after evacuation. The advantages of this treatment become more apparent as the induration increases.

2. *The solid exudates.*—Recent deposits are frequently absorbed under careful treatment, and even without treatment; but I refer to such solid, pelvic exudates which have persisted for months and years, resisting all treatment; cases which are most perplexing, in which even surgery fails to afford relief. The usual remedies are the poultice, the hot douche, and iodine, perhaps massage, pressure, and rest. These are treated most effectively, like the pelvic abscess with induration of tissue, by electro-puncture, and yield even to vagino-abdominal galvanism—that is, the galvanic current without penetration of tissue by the electrodes. I have already reported several such cases, in which solid exudates which had existed from five to twelve years, and in which all possible treatment had been tried, even by eminent gynæcologists, disappeared after from twelve to twenty office treatments by vagino-abdominal galvanism, with currents not exceeding 100 millampères. I can give no better illustration of the merits of this treatment than by the report of a case in the wards of the Berlin Lying-in Hospital, and placed at my disposal by Professor Olshausen as a test case, the patient having been in the gynæcological ward for more than a month, under the hot water treatment, with but little benefit. The patient had for years been affected with prolapsus uteri, and some three or four months previous had contracted a pelvic cellulitis, as the result of which a solid mass now filled the entire left half of the pelvis, extending well into the right, so much so as to prevent the return of the

prolapsed uterus. The fever had ceased, but the pains were more or less constant and aggravated by every step. The uterus being prolapsed, it was impossible to insert the electrode into the vagina, so I employed the cotton-wrapped applicator as the negative pole in the uterine cavity, placing the large positive plate over the abdominal surface of the mass. One week after the second application of eighty or ninety milliamperes I was enabled to replace the uterus; the pains had subsided, the patient was perfectly comfortable and able to walk; whilst only in the smaller right exudate a decided reduction was noticeable, the easy replacement of the uterus afforded ample evidence of the absorption which had taken place. I myself made but two or three more applications, but the treatment was continued by the gentlemen who had so kindly interested themselves in the trial.

Much as I claim for electro-therapy, I am not willing to compare its results with those of Tait's operation, as has been done by some, although the tubes and ovaries are unquestionably removed in certain forms of perimetritis which might be successfully treated by galvanism. These are cases in which the organs are removed for the suffering caused by chronic inflammatory conditions, with induration, not suppuration; but whilst enthusiastic operators do not spare these cases, I hardly believe them fit subjects for surgical interference until all other means have failed. In course of time the indications will be so strictly formulated that each treatment will be relegated to its proper sphere.

Hæmatocele.—In recent cases the opening by the knife may well be replaced by electro-puncture, but in cases of long standing the electrical treatment is undoubtedly the most safe and rapid. The retro-uterine hæmatocele, like the solid exudate in consequence of pelvic cellulitis, yields readily to the galvanic current. I have myself seen these cases disappear under this treatment, and believe that not a few fibroid tumours reported in recent literature as cured by electro-therapy were of this nature. The opening of recent cases by electro-puncture to afford an outlet to the fluid is more

safe than the surgical operation to any but the experienced operator, and in chronic cases the treatment by the current alone, by the vagino-abdominal application, without puncture, is free from any possibility of danger, without pain to the patient, and certain of result, even with currents of moderate intensity, from forty to eighty milliampères. Thus in a case reported to me from the clinic of Dr. Martin, this method was tested. The patient, who had been treated without marked advantage in the wards of one of the gynæcological hospitals, constantly in bed, was rapidly improved by the electrical treatment in the outdoor department without puncture, by the simple vagino-abdominal application.

II. *Neoplasms (a.) The electrolytic action of the current.*—Notwithstanding the remarkable results achieved by anti-septic surgery, the dangers of laparotomy for the removal of uterine tumours are still such that we must give preference to any less dangerous method, by which the patient may be relieved, and prominent among these is the electrical current: an admirable remedy in certain forms of neoplasm, but by no means applicable to all. Only certain forms of neoplasms, and neoplasms in certain stages of development or retrograde metamorphosis are amenable to treatment by the electrical current; whilst in all, the sufferings of the patient may be relieved and her general condition improved, the growth itself can be reduced in some only. Certain of these growths may be treated successfully by electro-therapy, others can be removed by the knife only, and the course to be pursued depends upon the existing pathological conditions: hence it is important that we carefully discriminate between the different forms of neoplasm in order to decide upon the relative merits of the various modes of treatment.

Dr. Martin of Berlin, in a paper read before the last meeting of the German Gynæcological Society, at Halle, in June, 1888, throws a great deal of light upon this subject. In analysing the cases operated upon by himself he points out the large number which were found in various states of retrograde metamorphosis. Some of these forms lead to absorp-

tion, others to a vicious degeneration, and electrolysis hastens such processes when once inaugurated : hence the excellent results of electro-therapy in tumours of a healthy growth, or those in which fatty degeneration has begun. This process, with the following absorption, is inaugurated or hastened by the electrical current, and it is evident that under such circumstances we may expect a reduction of the growth. But it is equally clear that those tumours which have already entered upon one of the many processes of metamorphosis which lead to degeneration cannot be revolutionised ; on the contrary, as has been my experience, this form of degeneration, be it cystic, suppurative, or malignant, will be hastened ; but whilst the symptoms are temporarily improved, a reduction of the tumour is impossible. An active circulation, with a healthy condition of the patient, is likewise more favourable to healthy retrograde metamorphosis and absorption. Some of the most striking, although by no means the most important, results of surgical electro-therapy have been gained in the treatment of uterine tumours. It is, indeed, a victory for so harmless a method of treatment that a large growth which threatens life is reduced, and rendered harmless by so mild a form of treatment. The analysis of the pathological conditions in cases actually operated upon as furnished by Dr. Martin, enables us to differentiate with some accuracy, and affords a probable explanation for failure or success in certain cases : it is not the inefficiency of the remedy, not necessarily the inexperience of the operator, but the character of the growth. We cannot expect, by electrolysis, to reduce a uterine tumour in cystic, suppurative, or sarcomatous degeneration ; whilst in a tumour in healthy growth, or one in which the development has already ceased, a healthy process of retrograde metamorphosis may readily be inaugurated. The advantages of this treatment over the operation, even in cases in which the diagnosis is not fully established, are numerous. First, life is not endangered. Second, it may be resorted to by every practitioner with more or less probability of success. Third, even should the tumour not be permanently reduced,

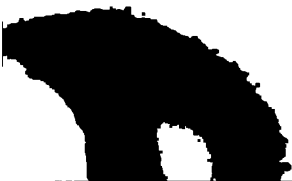
the symptoms will be relieved and a comparatively healthy condition approximated. Whilst in certain cases, if urgent symptoms, especially septic infection, exist, there can be no question of the propriety of an immediate operation; in general we can well endorse the statement of the eminent surgeon, Keith, that he who resorts to the knife for the removal of solid uterine tumours, without having first thoroughly tested the effect of electrolysis, is criminally guilty.

The methods of treatment vary greatly; our first effort is always to relieve the most aggravating symptom, hæmorrhage, by the use of the positive pole within the uterine cavity; or amenorrhœa, or painful and scanty menstruation, by increasing the flow by the use of the negative pole; relieving pressure upon the rectum and bladder by the absorption of adhesions which bind down the tumour, or the contraction of the tumour by faradism or weak, interrupted galvanic currents. If the tumour is soft, and consists of muscular fibre—more likely a myoma—interrupted currents will serve to contract more rapidly; if solid and hard, of a fibroid nature, a powerful electrolytic effect must be attempted. Hence the method of treatment, as the probable result, varies greatly with the character of the growth, and our failures hitherto are in part due to the indiscriminate application of the various methods of treatment to all kinds of tumours. In cases in which operation is out of the question by reason of malignancy or an unfavourable local condition, or if the consent of the patient is refused to operation, we should resort to electro-therapy for the purpose of relieving pain and discomfort, and restoring healthy functional activity of bladder, bowels, and stomach. At present, by reason of the danger connected with operative interference, patients so affected are usually brought to the surgeon in a later stage of the disease, when they are forced to seek advice by reason of the great discomfort experienced; but when the possibility of a successful treatment which is free from danger, is more generally known to the laity and profession, these patients will seek advice at a period when a

successful electrical treatment is by far more probable; in the early stages before a vicious retrograde metamorphosis has been inaugurated. Whilst the surgeon may hesitate to interfere before the tumour has attained such a size as to cause inconvenience and suffering, he is not alone thoroughly justified in resorting to electro-therapy in the earliest stages, but it is even his duty to do so, and I believe that under these circumstances the most successful results will be accomplished.

(b.) *The destructive action of the pole direct.*—Smaller growths are, with the present antiseptic methods, so easily removed by the knife, that little attention is given to other methods, and yet the advantages possessed by the electrical treatment are such as to merit consideration. The surgical operation must be performed at the home of the patient. The electrical treatment, as a rule, can be carried on in the consulting-room or the outdoor department of the clinic, and most patients prefer such procedure to a cutting operation. In all small growths we utilise the chemical action of the pole direct. Small submucous fibroids, uterine polypi, urethral caruncles, and hæmorrhoids are readily and safely treated by this method, which must not be compared to their removal by the galvano-cautery or thermo-cautery, as we have in the metallic pole of the galvanic battery a chemical cauterisation, and if the negative pole be used, an electrolytic action upon the surrounding tissue, which is far more efficient toward accomplishing a permanent cure than the mere local destruction which is caused by the cautery, provided that the structure is one which admits of a retrograde metamorphosis.

Extra-uterine pregnancy.—The results of laparotomy have improved so much within the last year or two that we must limit the application of electricity to suitable cases only; it should no longer be a question which is the preferable treatment for extra-uterine fœtation, laparotomy or electricity, but what are the conditions which indicate the one and what the conditions which indicate the other?



There is no doubt as to the propriety of surgical interference ; first, if hæmorrhage or rupture of the sac has occurred ; second, if urgent symptoms are present ; and third, under all circumstances in the later stages.

In the first two, possibly three months' destruction of the ovum by the electrical current is generally the preferable course, as death will then be followed by absorption without further untoward symptoms. Unfortunately, the condition is rarely discovered at this period ; but if so, it is, as a rule, observed by the general practitioner, who would be unwilling to resort to laparotomy, but who may with the utmost safety test the effect of the galvanic current. The great advantages of electro-therapy in the treatment of extra-uterine pregnancy are evident, most especially so because its field is limited to the early months when the diagnosis is doubtful and the patient is usually in the hands of the family practitioner, perhaps far removed from the experienced operator.

First. At this period, when electricity can be successfully applied, the diagnosis is, as a rule, so doubtful that even the skilled surgeon would be unwilling to resort to laparotomy. There is no danger in the guarded use of the current, and even if the diagnosis is doubtful, it should be applied by the general practitioner at once, as the absorbent action of galvanism is indicated whatever the nature of the tumefaction may be.

Second. As its use is free from danger, it can be applied at the earliest possible moment as soon as a suspicion of the condition exists.

Third. It can be applied with safety by the practitioner in charge of the case.

Fourth. Should the tumefaction not disappear, other measures can still be taken at the proper time.

I believe it to be a valuable remedy, although with a limited field, but extremely important as admitting of an active interference at an early stage, when the diagnosis must of necessity be doubtful, and no one would venture to resort to the dangerous alternative of laparotomy.

Let it be understood that I do not deem it right to compare electricity with laparotomy in the treatment of extra-uterine foetation; the former is indicated in the early months, when death of the embryo is likely to result in absorption, and should be resorted to as soon as the condition is suspected, whilst laparotomy is in place when absorption is no longer possible, or when threatening symptoms demand immediate relief.

Résumé.—The electrical current is a potent factor in the treatment of surgical lesions, under certain conditions, which must be defined with precision if it is to be classed amongst the accepted scientific methods; this has never been done, and in consequence of the haphazard application this really valuable remedy is ignored, if not condemned, by many. In this paper I have endeavoured to formulate such indications founded upon the principles which have guided my own practice, and to demonstrate the application of the remedy in surgical cases; the class of surgical cases in which we may substitute galvanism for the knife are those in which the electrolytic or chemical action of the current may be utilised, neoplasms or inflammatory products in which a retrograde metamorphosis and absorption can be inaugurated.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL
SOCIETY.

Renal Disease following Utero-Ovarian Lesion.

By GEORGE J. ENGELMANN, M.D., St. Louis, Mo.

The frequency of renal disease in connection with pelvic changes is well known to every gynæcologist, and we constantly meet with annoying cases of this kind in our practice; yet although attention has repeatedly been directed to this subject, it has not received that general acknowledgment and consideration which it merits. Some of our most recent and most thorough works on general medicine make no mention of the peculiar renal lesions, or of the various forms of ureteritis, referable to pelvic abnormalities.

Isolated cases are occasionally reported, and those forms of renal disease which follow uterine cancer, pyelo-nephritis and hydro-nephrosis, have been more thoroughly studied, as the *post-mortem* room furnished a favourable opportunity for a correct interpretation of the peculiar and often ill-defined symptoms; of late, with the progress in renal and abdominal surgery, and the improved methods of exploration and treatment of the ureters, these forms of disease have been more frequently and more readily recognised, and are assuming greater prominence and greater practical importance; hence, I deem it an opportune time to present this subject and, as the most frequent and troublesome of the various pathological conditions which so occur, I desire to call attention especially to the ureteritis and nephritis resulting from distortion or compression of the ureters by neoplasms, exudates, or displacement; above all, by chronic pelvic inflammation.

I will first, however, briefly review the various forms of uterine and pelvic disease which may lead to renal changes, classifying these cases by the causative pelvic conditions.

Classification.— Functional derangements and morbid changes in the kidneys may result from:—

I. The involvement of contiguous structures, the direct spreading of disease to ureters and bladder—(a) from without; of pelvic inflammation or malignant growths; (b) from within, by the mucous tract; of septic or gonorrhœal inflammation.

II. Pressure from displaced organs, neoplasms, or inflammatory products—(a) on the bladder; (b) on the ureters.

III. Nerve influence—(a) reflex irritability or reflex contraction of urethra, bladder, or ureters; dysuria, anuria, or hysterical urine, by direct reflex action of the urinary organs; (b) disturbance of innervation influencing circulation and secretion, perverted nerve action as it accompanies pregnancy, amenorrhœa, and other uterine changes.

I. *Renal disease determined by the involvement of contiguous structures.*—(a) The fundus of the bladder and the pars pelvina of the ureters, from the brim of the pelvis to their vesical insertion, are more or less affected by all circum-

uterine changes, and perimetric inflammation is especially liable to involve these tissues. The ureter is affected by pelvic inflammation precisely like the fallopian tube, or any other neighbouring structure, and ureteritis and cystitis follow long-continued inflammation of the walls, which gradually spreads to the pelvis of the kidney, and finally to the renal tissue itself. (*b*) Puerperal fever or septic inflammation following vaginal operations or decomposing neoplasms may extend to the kidney through the ordinary channels, or, like gonorrhœal inflammation, by direct infection through urethra, bladder, and ureters.

II. *Renal disease may result from the pressure of displaced organs of neoplasms, or inflammatory masses on bladder or ureters.*—(*a*) Pressure on the bladder, which so frequently occurs, either from an anteflexed fundus, ovarian tumour, or uterine fibroid, or from inflammatory deposits in the utero-vesical fold, has always been recognised as a cause of vesical irritation and cystitis; if continued for a sufficient length of time, and under conditions favouring the progress of disease, ureteritis, pyelitis, and pyelo-nephritis will result. (*b*) Pressure on the ureters is most likely to result from exudates or from induration of the surrounding tissues by chronic pelvic inflammation, from cancerous masses or neoplasms, ovarian tumours, and especially fibroid growths and displacement of the pelvic viscera; above all, retroflexion and prolapsus uteri. The obstruction thus inaugurated will lead to ureteritis and then to pyelitis with its sequences, less frequently to hydro-ureteritis and hydronephrosis, or to complete suppression of urine and fatal uræmia.

III. *Functional derangement and finally morbid changes are produced by nervous influences emanating from the diseased pelvic viscera.*—(*a*) As reflex phenomena, or (*b*) by perverted action of the secretory nerves due to the intimate connection of the uterine and renal plexus.

(*a*) The influence of the nervous system and of the genital organs upon the urinary tract is in some cases so evident that we have good reason to ascribe other less well marked symp-

toms to the same cause ; as the copious, so-called hysterical, urine seems a reflex symptom distinctly referable to nerve influence, sometimes to utero-ovarian irritation, so there is an anuria due to the same cause ; spasmodic contraction of the urethra or ureters occurs as a reflex symptom, also vesical and renal tenesmus. Frequent as these conditions are, they rarely persist sufficiently long to influence the kidney permanently and to produce renal disease ; suppression of urine occurs as a reflex, more generally speaking, hysterical symptom, and may lead to pyelitis, a mild nephritis, or a hydro-nephrosis. In the Philadelphia *Medical News*, 1889, a case is cited of mild nephritis, with pus and casts in the urine, following spasmodic contraction of the urethra, and I believe such cases to be more frequent in connection with pelvic disease than we may suppose, as the slight symptoms produced are overlooked amid the varying pains of the primary disease.

Dr. E. P. Fowler,¹ of New York, in his book on suppression of urine cites, amid his ninety-three tabulated cases, two instances of suppression due to hysteria, and Farlow refers to four in his own practice. Whether these were distinctly reflex or merely sympathetic I cannot say.

(b) Functional derangements and even tissue-changes in the kidney occur, in connection with physiological and pathological state of the uterus, which for the present we can only refer to perverted nerve action, a disturbance in innervation or circulation, passing away if merely functional or of short duration.

Whilst the local cedema, which appears in various parts of the body as an accompaniment of the menstrual state may appear as a vaso-motor reflex, a tropho-neurosis, it also exists as a result of reflex renal action, and when this is the case I have repeatedly observed an aggravation of the existing cedema, during the period—for instance, in cases in which

¹ John W. Farlow : "Suppression of Urine for Twelve Days from Compression of both Ureters." *Boston Med. and Surg.-Journal*, April 4th, 1889.

pyelo-nephritis already existed as a result of compression of the ureter by pelvic inflammation; in milder cases of the kind, when the œdema had not yet become permanent or the renal symptoms marked, it would appear only during menstruation. The œdema which sometimes accompanies amenorrhœa, is probably a resultant and not a concomitant, like some of the forms of renal disturbance accompanying pregnancy, a reflex anæmia of the kidney. The few cases which I have seen have appeared so to me, as I have been obliged to exclude other causes; most striking of these was a case which, I unfortunately, did not see but a few times:—

Miss M., from Texas, a well-built, slender girl of sixteen had menstruated very irregularly during the first year, and had missed her periods entirely for the last four months; during the first part of this time she was very much bloated, without febrile symptoms or other evidences of disease. Iron and other tonics were given, and when I saw her, on account of headache and general lassitude, a comparatively slight œdema remained; the urine was somewhat pale, but normal; no vaginal examination was made.

I continued tonics and sent her home from boarding-school; two months later her physician informed me that the menstrual flow had returned after the use of permanganate of potash, and that the œdema had disappeared, the patient stronger, in good health, urine normal, and no evidence of kidney disease.

The renal changes occurring during pregnancy I believe to be more generally due to pressure of the gravid uterus on the ureters, but a certain percentage may be due to disturbance of innervation. Fleischler, of Berlin (*Zeitschrift für Geburtshülfe und Gynäkologie*, 1882, viii. 2), claims that in two per cent. of all cases the pregnant organ elicits a reflex anæmia of the kidney which leads to morbid conditions, the typical kidney of pregnancy (*Schwangerschafts Niere*), with changes in the epithelium of the glomeruli, albumen in the urine, and, in later stages, casts and renal epithelium. Similar circulatory changes in the kidney appear, he says, during parturition, as

reflex symptoms in response to uterine contractions during labour pains.

The author deems the termination of these conditions in chronic nephritis probable, but not proven; according to my observation, it does occur when the morbid influence excited during pregnancy by physiological changes in the uterus is continued by following pathological states, such as displacement or subinvolution; in cases in which pelvic peritonitis followed labour, with laceration of cervix and perinæum, the nephritis of pregnancy was followed by persistent ureteritis and pyelo-nephritis. Quite a number of these indistinct and peculiar cases of renal disease which I have seen in connection with utero-ovarian changes have been distinctly referable to a severe labour, six and even ten years ago; but whether due to the labour, or inaugurated during pregnancy and aggravated by the labour, I cannot say.

Renal lesions following pressure on the pelvic portion of the ureter.—The most frequent, and the most important of these forms of nephritis, to the gynæcologist, at least, are those which are produced by intra-pelvic pressure, to which both bladder and ureters are exposed.

I need not dwell upon those cases, mainly pyelitis and pyelo-nephritis, resulting from the upward extension of vesical inflammation caused by pressure or traction on the bladder, as they are well known, readily detected in their early stages, and more easily remedied. The annoying symptoms usually caused by vesical irritation lead to speedy investigation and treatment, so that the condition rarely continues for a sufficient length of time to determine renal changes. Far more occult and dangerous is pressure on the ureter, and it is the causes and results of such injury which I wish mainly to discuss: the causes I have mentioned, pelvic inflammation neoplasm, and displacements, the morbid changes which result in the excretory tract, and finally in the kidney, are, as we might expect, from mechanical obstruction, and the extension of inflammation from contiguous structures—ureteritis, then pyelitis, pyelo-nephritis, finally cysto-uretero-pyelo-

nephritis; or hydro-ureteritis and hydro-nephrosis, contracted kidney, and cystic or fatty degeneration.

The progress of these cases is usually slow and extremely insidious; and they are overlooked in their earlier stages because the earlier and less violent symptoms are so blended with the backaches, bearing-down, and lumbar pains of the pre-existing and more prominent pelvic trouble that they are naturally ascribed to this.

Not until the renal disease is assuming serious proportions, in its later stages, is attention directed to the complication by vesical and renal tenesmus, by intense renal pains, or the agonizing pains of nephritic colic or urinary suppression; perhaps the painful distension of a hydro-nephrosis or an œdema, disturbance of vision, headaches and coma.

Relief is then doubtful, unless it may be attained by the removal of an obstructing tumour, and life is endangered, either by suppression of urine, uræmic intoxication, and coma, or by the slow failing from chronic nephritis with cardiac complications; the suffering is most intense and almost constant.

Parts of the ureter exposed.—The ureter is exposed to mechanical disturbance from the pelvic viscera in its entire pelvic portion, from the point at which it crosses the pelvic brim to its vesical insertion. It is endangered in its lower portion, between bladder and cervix uteri, by compression against the symphysis, and against the brim of the pelvis at the junction of its pelvic and abdominal parts; at its lower curvature, where the right ureter crosses the rectum, it is frequently distorted, and subject to injury from the uterine fundus, and displaced or indurated appendages; compression and distortion from chronic pelvic inflammation are most liable to occur at the point where the ureter penetrates the parametrium in its course through the cellular tissue; changes in this structure readily involve the delicate tubes which it surrounds.

The right ureter is, perhaps, somewhat more liable to injury than the left, because a part, over one centimetre in



length, at the commencement of its lower curvature, rests on the perineal flexure of the rectum which is so liable to distention by hard, constipated masses, thus displacing the ureter and subjecting it to pressure from overlying structures. The greater tendency of the right kidney to displacement also increases the danger to the ureter on that side, which may be affected by compression in abnormal positions of the kidney or by narrowing of its canal by distortion, and thus lead to renal complications.

Sources of injury.—The various uterine and pelvic derangements which lead to the obstructive forms of nephritis, by injury to the ureter, have already been mentioned. Most frequent, as causes of renal changes, are pelvic inflammation and malignant disease of the uterus. Peri- and para-metritis, pelvic cellulitis, and pelvic peritonitis disturb the ureter either by compression between inflammatory masses or indurated tissues, or distort and displace it by the traction of cicatricial bands; thus, Farlow found, upon *post-mortem* examination in a case of death from suppression of urine, both ureters imbedded, near their entrance into the bladder, in a dense fibrous stricture, the tissue extending to either side into the broad ligament. At the point of stricture, the calibre was reduced so that a small probe would scarcely pass, whilst above they were moderately dilated, as were also the pelves of the kidneys.

Dr. Henry Coe reports three *post-mortem* examinations in which pressure was caused at a point two inches from the vesical insertion by cicatricial nodules associated with uterine disease.

Howard A. Kelly, in a case under treatment, found the left ureter hard and sensitive and so changed, that it was at first mistaken for a large tender ovary. Sängér also describes similar conditions.

Inflammatory conditions of the parametria not alone distort, displace, and compress the ureters, but extend directly to this part, which is imbedded within their tissue.

Carcinoma uteri.—Almost as frequent is carcinoma uteri as a cause of compression of the ureters, and obstructive ne-

nephritis follows malignant growths far more often than it does benign neoplasms, probably because it not alone compresses, but also directly involves the pelvic tissues and the excretory channels.

These forms of renal disease, although of no therapeutic interest, are better known than any other due to pelvic obstruction, and have been more thoroughly observed, the fatal termination which soon follows this complication of serious lesions, enabling the attendant to verify by *post-mortem* examination the conditions detected at the bedside.

As early as 1883, Artaud (*Gazette Médicale de Paris*, August 4th, 1883) described nephritis with hypertrophy of the heart following compression of the ureters by carcinoma uteri.

When the causative compression was slight the kidney showed but little, if any, enlargement, with molecular (kœrnige) infiltration about the uriniferous tubules, the arterioles and glomeruli, with hypertrophy of the glomeruli and the tubuli contorti, and fatty degeneration of the epithelium. If pressure was more intense or of longer duration, dilatation of ureter and pelvis existed, with corresponding atrophy of the kidney; the tissue about tubules and glomeruli was found in a state of fibrous degeneration in place of the early infiltration; the tubules atrophied, glomeruli in fibrous or cystic degeneration; the epithelium in the tubuli recti and the larger channels (*Sammelkanälchen*) in a state of embryonic degeneration. Hypertrophy of the left ventricle was repeatedly observed, but without myocarditis interstitialis.

Lancereaux (*Gazette Médicale*, 1886, No. 24) cites twenty-three cases of carcinoma uteri, in which hydro-nephrosis was caused by compression of the ureters; an obstructive condition (stauungs nephritis) was followed by atrophy and interstitial nephritis. Uræmia occurred in all but five, and of these three died from hæmorrhage before uræmia could develop. Hypertrophy of the heart this author did not observe, hence he considers this not a direct sequence to renal

disease, but due to the arterial degeneration which accompanies primary nephritis.

Fibro myoma uteri.—Of all non-malignant neoplasms, solid tumours of the uterus are most likely to produce such conditions, far more so than ovarian growths, as they are less yielding and less movable. These renal troubles form an important factor in determining the question of operative procedure; indication and prognosis of hysterectomy often depending upon this secondary condition; a tumour which is stationary and otherwise perfectly harmless demands active treatment if physical symptoms, or the results of urinary examination indicate renal lesions, and the prognosis depends upon the extent of this injury; on the other hand, if renal disease has progressed too far, an operation, otherwise timely, is counter-indicated.

I recall a case of this kind in a maiden lady, forty-seven years of age, to whom I was called during the period of uræmic intoxication, previous to its fatal termination. The *post-mortem* examination revealed a uterus enlarged by multiple fibroids, settled low down in the pelvis, almost obliterating the vagina, and extending, on the right, to the height of the navel, the tumour to the left being considerably smaller, but broader; the bladder was compressed against the symphysis, thinned and flattened, and the right ureter was forced, by a bulging mass of the tumour, against the pelvic brim, thinned below, thickened above the point of compression, so that it could be felt externally; the right kidney contracted, the pelvis, like the upper part of the ureter, dilated. The left kidney was likewise contracted, but without dilatation of pelvis and ureter, the latter but little enlarged by induration of its walls.

The notes of this interesting case are, unfortunately, imperfect, as they were taken some years ago, before my attention had been attracted to the subject and before I fully appreciated the true relationship of the various conditions.

A similar case, but more carefully observed, is related by

Dr. A. T. Cabot (David Clapp and Son, Boston, 1887), in his paper on hysterectomy for the relief of pyelitis from obstruction. The case was one of a small fibroid, in a lady seventy years of age, which had hardened and settled down in the pelvis, having given her no trouble for years. For a long time she had suffered from frequency of micturition, but over a year before the fatal termination, after a fall, which had been followed by an attack of acute pelvic inflammation, the urinary symptoms were aggravated. After this the urine was loaded with pus, bits of phosphatic material passed, pain in the bladder increased, urination became excessively frequent, with almost constant tenesmus, and she died in uræmic condition with suppression of urine.

The fibroid proved to be calcified and matted down in the pelvis by adhesions everywhere; the bladder was contracted and thinned, containing a few drops of ammoniacal urine; both ureters had been compressed in their passage over the brim of the pelvis by the tumour, and were as thick as a lead pencil above this point. The kidneys were large, soft, dark red, the pelvis much dilated and full of phosphatic material.

Unfortunately, the diagnosis is rarely made when compression of the ureters first occurs—not until the kidney is affected, when renal and vesical tenesmus, intense darting pains along the course of the ureter, and pus in the urine, indicate the condition, does the surgeon thoroughly realise the danger; if this occurs in the earlier stages, if pyelitis soon follows, before structural changes have progressed too far, the patient may yet be saved. The indication for active interference is distinct; we must proceed at once, bearing in mind that unless relief is afforded the sufferer is doomed.

In the earlier stages, posture and manipulation, the raising of the tumour, may remove the trouble; even in the later stages the electrical treatment may be resorted to, by which sufficient reduction and absorption, especially of inflammatory products, is attained to free the ureter from pressure, but unless these measures speedily succeed, hysterectomy is the only alternative; in advanced stages, however, the patient should not be subjected to this then needless danger.

I have succeeded, by the use of electricity, in relieving a patient in the early stages of uræmic intoxication, due to suppression of urine from rapidly developing compression of both ureters by utero-ovarian cancer complicated with pelvic inflammation. Micturition was exceedingly scant and painful, the urine containing pus and albumen, renal tenesmus excessive, headache, persistent nausea, and vomiting present. By the daily use of vagino-abdominal galvanism, with from eighty to one hundred milliampères, a decided shrinkage of the mass was produced, and the secretions increased. The patient left for her home restored as far as she could possibly be, micturition abundant and painless, sensorium free, appetite and digestion good.

In another case, that of a young coloured woman, a small fibroid, not larger than a child's head, in the anterior wall of the uterus, compressed the bladder and left ureter, and led to vesical tenesmus with frequent micturition, and jagging-lancinating pain along the course of the ureter on the left side, from the brim of the pelvis to the kidney; the urine contained pus and pavement epithelium from bladder or ureter. Negative electro-cauterization, not puncture, was resorted to, as almost complete amenorrhœa existed, with currents of one hundred and fifty milliampères, after the first tentative treatment with milder currents. The application was repeated every second day. Improvement was rapid, and the renal function was restored, the tenesmus ceasing after two weeks' treatment; the last traces of pus disappeared more slowly.

Unless relief can be so obtained, and this may be but temporary, hysterectomy must be resorted to, as it has been successfully done by Dr. Cabot and others.

Pressure by the pregnant uterus.—Renal changes observed during pregnancy may be reflex in character or due to a disturbed innervation, but in the majority of cases they are referable to mechanical influence, to vascular changes or to obstruction caused by pressure upon the bladder or the greatly exposed ureters; the condition produced is one which Fleischler distinguishes from both chronic parenchymatous

and interstitial nephritis, and compares with the kidney of cholera, like which it rarely results in a chronic affection.

Among 1,000 gravidæ he found twenty-six so afflicted, the urine in all cases containing albumen, only in a few of the more severe did it contain casts, mainly hyaline, some granular, and rarely renal epithelium.

During labour albumen is more frequently found, as the renal circulation and the excretory channels are more likely to be affected both by reflex influences and by pressure, than is the case during pregnancy. I have repeatedly, in patients suffering from pelvic disease, seen renal lesions which had existed for years, developing slowly, making but little progress, and referable to a severe labour. As the uterine disease caused the prominent symptoms, and the nephritis was not distinctly expressed, but the vesical irregularities were marked, her attendants had never detected the renal lesion, but explained the tenesmus and dysuria by interference with the function of the bladder by the uterus. Careful examination revealed the pyelitis or pyelo-nephritis, and the patient invariably recalled a certain labour to which she distinctly traced renal and vesical symptoms. These may have commenced during the pregnancy, but were overlooked amid all the annoyances of that period, being observed only after the disappearance of all other symptoms with delivery. Flaischler found this evidence of renal disturbance in 25 per cent. of the primipara and 8 per cent. of the multipara, among 537 parturient women examined.

Uterine displacements.—Prolapsus, or retroflexion and descensus uteri, may lead to pyelo-nephritis or to hydro-nephrosis, by distortion, displacement, or compression of the ureter.

In prolapsus we frequently find the bladder drawn downward so that the ureter is distorted or the trigonum is compressed below the symphysis, when it will be found excessively sensitive. Virchow described such a case in a woman, forty-three years of age, in the Berlin Obstetrical Society in 1846, in which the ureters were contracted up to the pelvic

brim (which, however, seems to indicate pressure at this point) and the pelves of the kidneys dilated; and a similar case, with hydro-nephrosis and renal atrophy, is reported by Phillips in the *Transactions of the London Obstetrical Society*, vol. xi., page 272.

Symptoms.—The symptoms are, in the majority of cases, such as not to attract attention, often extremely indistinct until the renal disease has progressed perhaps beyond relief; the changes usually develop slowly in the course of years, and the less marked renal and ureteral pains of the earlier periods are obscured by similar pains arising from the original pelvic disturbance; renal disease causes pain in the region of the kidney, posteriorly toward the spinal column, and anteriorly beneath the lower ribs, where we frequently find a reflex or sympathetic pelvic pain, then, especially if the ureter is involved, it extends downward along the course of this organ toward the bladder; whilst the pain of a perimetritis, or of an enlarged or displaced and dragging uterus, extends from the pelvis upward in the same direction, and ovarian pains likewise frequently radiate upward to the kidney; these pains, due to disease of entirely distinct organs, all radiate toward the same region. The utero-ovarian pain is greatest in the pelvis, whilst the renal pain is most intense above, and pain due to disease of the ureter extends over the intervening region. We can readily differentiate between uterine and renal pains when but one is present, but when co-existing, neither sufficiently intense to be characteristic, it is almost impossible to determine precisely the cause of each symptom; the symptoms, moreover, are varied, as points, kind, and cause of compression, and the resulting changes differ greatly.

In the earlier stages the symptoms are most vague, perhaps only a dull aching, as it is frequently found when referable to uterine disease; later, renal and vesical tenesmus, extremely scant and painful, and again very copious micturition, frequent getting up at night, with restless sleep, and relief for a short time after passing water, are among the

more frequent symptoms of uretero-renal affections ; darting, spasmodic, and more or less persistent, burning pains from the brim of the pelvis along the course of the ureter toward the kidney, and down toward the bladder, are complained of ; in the region of the kidney a deep-seated pain is often referred to, or a nervous, burning, and again a lancinating pain, extending across the small of the back, and anteriorly toward the liver. These pains are not constant ; both in pyelonephritis and the frequently intermittent hydronephrosis they are often spasmodic, sometimes appearing daily, then lasting for several hours, especially during the night, sometimes not appearing for five or ten days, and then persisting for twenty-four or forty-eight hours ; the less frequent their occurrence, the longer the period of suffering.

As the disease progresses oedema develops, which, at first, appears only during periods of aggravation, then anuria occurs more frequently and finally leads to uræmia, or uræmia occurs without a preceding suppression.

The symptoms of suppression of urine in these cases of nephritis, resulting from slowly developing and often intermittent compression greatly mystify, as they cloud the picture usually presented by suppression, which results either from direct and complete obstruction in the passage, or from inability of the kidney to perform its function. I will by no means say that in all cases the symptoms develop until they lead to anuria or uræmia ; the progress of the disease at times is almost imperceptible. I have seen patients, even after a continuance of six and eight years, still with the same vague discomforts and occasional exacerbations of the first period, probably where a comparatively slight obstruction exists, a compensation has taken place or the organs have, to a certain extent, accommodated themselves to the existing conditions—now and then the urine may distinctly indicate renal disease, but as a rule this is not the case, and only persistent and laborious investigation will reveal the fact that the kidney is affected, but no more : a definite pathological condition is rarely detected.

These cases may exist for years unobserved until an injury, a fall, or a lighting-up of a pelvic inflammation will suddenly develop symptoms which have been quiescent, and such accidents generally aggravate them when already existing.

Vesical symptoms are often prominent, first due to nervous influences, later to the resultant cystitis. The conditions are perplexing and deceptive, and I have known skilled surgeons to suspect vesical disease as the leading factor from the prominence of these merely sympathetic symptoms, and examine the bladder in expectation of finding calculi or new growths.

The condition of the urine varies according to the development and nature of the renal lesion, as a pyelo-nephritis or a hydro-nephrosis results, but, in either case, it changes greatly in quantity and appearance, sometimes perfectly normal, sometimes most threatening in appearance; in the later stages, it is, of course, more constant; it will contain pus, phosphates, sometimes small bits of phosphatic material from the pelvis of the kidney, hyaline or granular casts, with granular matter, pavement epithelium from vagina, bladder, and ureter, and some renal epithelium, rarely epithelial casts. Urates often abound; casts, and all distinct evidences of renal diseases may disappear for months in cases which have existed for years, notwithstanding that the disease continues and the pains persist, though not with the greatest intensity. The urine is generally of high specific gravity, slightly acid; in the later stages, excessive, scant and alkaline; a striking symptom, whatever the character of the urine be, is its variability, which is frequently due to the fact that one kidney only is affected; especially if unilateral uretero-pyelitis or pyelo-nephritis exist. At times the urine is found normal, so that even repeated examination fails to detect any change, probably during complete occlusion on the diseased side. Hydro-nephrosis may be distinctly intermittent, and varying pressure may result in more or less intermittent forms of pyelitis.

Diagnosis.—The diagnosis has not generally been made until the renal symptoms had well developed, and pus, in the peculiar and variable urine, with vesical symptoms, as the first striking symptom called attention to the serious complication of the long-existing pelvic disease.

The region of the kidney is sensitive; the kidney, if it can be felt, painful—so also the track of the ureter, which may sometimes be felt in its abdominal portion, as a thickened cord.

The pelvic portion of the ureter is usually thinned (when the point of pressure is at the pelvic brim), rarely thickened, sometimes excessively painful, like the entire trigonum, from the point of its insertion as far as it can be traced in the pelvis. The symptoms vary from those of all primary, well-defined, renal diseases; vesical disease, which may be simulated is excluded by the acid and occasionally clear urine; the occasional presence of renal epithelia or casts, in addition to pus and mucus, indicates renal complication; the complete intermission of symptoms, together with the limitation of the site of pain, indicates the unilateral disease. The sympathetic pain which gradually appears on the other side, even if it be due to an extension of the disease, is less violent in character.

Bimanual examination is important as a diagnostic resource, but does not always serve to indicate the existing condition; in favourable cases we can detect a thickened ureter above the brim of the pelvis, which is painful to the touch, and a thinning of the tract in its pelvic portion, with sensitiveness of the trigonum. If the ureter is exposed to pressure near its vesical insertion, the pelvic portion beyond this point may be very much enlarged, and sometimes it is thickened by inflammation.

The point of pressure we can rarely determine with certainty, but should a dilated or thickened ureter be felt above an inflammatory mass, the thickened parametrium, or a neoplasm, the diagnosis is assured. This, however, is extremely rare, and the diagnosis is, as a rule, one of ex-

clusion, and all existing symptoms must be considered in conjunction.

Palpation of the ureter as advocated by Säger, and recently by Kelly, must be practised, and if this is not satisfactory, the sound should be tried; but whether the sound be used for diagnostic or for therapeutic purposes, palpation must precede this procedure, as it may indicate the location of the vesical opening and the course of the ureter, and thus facilitate the operation. I refer to the valuable paper of Dr. Kelly for the details of this method.

Palpation will tell us of dilatation or thickening, but not of contraction of the canal, which may exist, and at a point not to be reached by palpation, or may occur in a thickened ureter; hence a positive diagnosis is hardly possible without the assistance of the sound. Unfortunately the probing of the ureter must still be termed a difficult operation, which should be practised with great care until we have become more familiar with it, and until the details of the procedure are more generally taught.

Preparatory to the exploration of the ureter, the urethra should be dilated, and then the trigone may be located by touch, and by means of the endoscope by sight.

I would hardly advocate colpo-cystotomy, or colpo-uretero-cystotomy for purely diagnostic purposes; but if we have reason to believe that the conditions are such that treatment may be indicated by this route, and the ureter cannot be probed through the dilated urethra, the instrument should be passed through an opening in the bladder, or direct into the ureter by colpo-cystotomy, or colpo-uretero-cystotomy.

Prognosis.—The prognosis for the present is unfavourable, and will remain so until the diagnosis is made at an earlier stage of the disease, as it may well be done when attention has once been fully directed to these conditions as probable complications of certain pelvic lesions; the most favourable prognosis may be given in that class of cases which is caused by ovarian tumour, prolapsus, or uterine displacement, provided they are detected before irretrievable renal lesions have

developed ; less auspicious, by reason of the more persistent character of the causative disease, are those which result from the compression of the ureters by fibroids or other benign neoplasms, but reduction of the growth by electrolysis, or its removal by hysterectomy, will insure a restoration of healthy renal action.

Still less favourable is the prognosis in those cases which complicate chronic pelvic inflammation, as they are the most insidious, in which the precise site of obstruction can rarely be determined, and in which the cause cannot be removed by surgical interference. In all cases resulting from carcinoma of the pelvic viscera, but one termination is possible, and this we can in no way hinder ; the fatal result to be expected from malignant disease is hastened by the debilitating effect of renal failure or more rapidly terminated by uræmic intoxication.

Like the development, the progress of these cases is extremely slow, and they may continue for many years. I have now under observation two cases of uretero-pyelo-nephritis, due to chronic pelvic disease, which have continued respectively six and seven years, and one of intermittent hydro-nephrosis with beginning pyelo-nephritis, which has existed some three years ; traumatic injury, as from a fall, may cause exacerbation, but unless some serious aggravation occurs, it is an extremely lingering disease, and when terminating fatally death usually results from suppression of urine and the resulting uræmia, either by obstruction or by failure of renal action. Hypertrophy of the left ventricle is recorded by Artaud in those forms of pyelo-nephritis which follow carcinoma uteri, but I have never observed cardiac changes although the circulation may be greatly impaired.

Treatment.—The treatment, to be successful, must be directed toward removal of the cause—the removal of the offending neoplasm by operation, or its reduction by electricity or ergot, the reposition of a displaced uterus when this is affecting the excretory channels, or the absorption of inflammatory masses or cicatricial indurations, if these are the

source of pressure. The medication usual in such cases is of slight assistance only, but should be resorted to for the sake of a possible temporary relief during the progress of curative treatment. In cases due to malignant disease this is our only resort, together with the use of narcotics for the relief of pain.

The question of treatment is a most trying one in cases of hydro-nephrosis or pyelo-nephritis complicating pelvic cellulitis, in which the source of pressure cannot be accurately determined and in which a distortion or compression of the ureter is caused by contraction or induration of the surrounding tissue, and in which, probably, some narrowing of its lumen is caused by infiltration of the walls. I believe that under such conditions, as we must attack the cause, we have no better remedies than those usually resorted to, to overcome chronic pelvic inflammation and its results—heat, iodine, and, above all, the absorbent effect of the galvanic current; but I have found these very inefficient in cases of this kind, and the question arises whether we must not treat the uretero-renal lesion direct, and whether catheterization of the ureter shall be attempted and treatment through the bladder, or by colpo-uretero-cystotomy, as Emmet and Bozeman suggest, or whether we must resort to laparotomy and cystotomy, with dilatation and drainage of the ureter through the relos of the kidney, or remove the diseased kidney.

Unless the causative compression can be removed, we must dilate the ureter from the bladder through the urethra, or even from a vesical opening, or resort to nephrotomy, though the latter seems rather a serious and the last resort, and can be only undertaken if the disease is strictly limited to one side.

Something must be done as the disease steadily progresses and ordinary means usually fail. If they have been tried and have failed, we are in duty bound to proceed to the exploration and dilatation of the ureter, and, if need be, to nephrotomy, whether we are sure that a narrowing, a pus cavity, a concretion, which can be overcome by operation, exists or not.

If we find such a condition, the patient will be relieved, but relief is even possible in these peculiar indistinct cases by the operation, if nothing be found to account for the suffering, as is proven by quite a number of well-attested cases; in some complete relief was afforded by dilatation of the ureter, in others by nephrotomy, though no positive lesion of any kind was found.

The question of treatment will be simplified when we learn to detect these cases in their earlier stages; when discovered in time, relief of the uterine and pelvic conditions leads to a thorough restoration of kidney, ureter and bladder. Many of these cases are constantly in the hands of gynæcologists, unnoticed, and never suspected, because the obscure symptoms never develop, as relief comes by a cure of the pelvic trouble which is being treated, and is apparently the only disturbance.

In the later stages, when all uterine and pelvic treatment proves unavailing, when a cysto-uretero-pyelo-nephritis, or a hydro-nephrosis with renal atrophy is established, with beginning implication of the other kidney, we are at a loss how to proceed; we can promise the patient but little, and even if she herself be willing to take all possible chances, are we then justified in operative interference? The course to be pursued must be determined by the conditions existing in the individual case. If free drainage can be established through ureter and bladder by dilatation of the ureter, or by treatment after colpo-cystotomy or uretero-colpo-cystotomy, we may expect a favourable result; should this fail, drainage from the pelvis of the kidney direct—cystotomy—may be attempted, and, if the kidney be very much diseased, it may be removed, provided that we have reason to be assured of the healthy condition of the other kidney. But when both organs are diseased treatment seems hopeless, and our hands are tied, however painful it is to see a woman in the prime of life slowly but surely failing, amid constant suffering, more especially so as we know that a trifling induration, or a slight contraction of tissue at a single point, is thus poisoning her existence.

Possibly we may free the ureter by laparotomy, and I believe that an exploratory incision is, at least, to be considered as well as drainage through bladder or renal pelvis, or even removal of the organ ; without interference the result is inevitable, and every effort, however dangerous it be, should be made to secure relief.

NOTES.

HONOURS FOR MR. LAWSON TAIT.—The College of Physicians of Edinburgh has just awarded to Mr. Lawson Tait a share in the Cullen Jubilee Prize, given for "the greatest benefit done to practical medicine by applying surgical means for the relief of medical cases." A similar prize was instituted by the Royal College of Surgeons of Edinburgh, the "Liston Jubilee Prize," given "for the greatest benefit done to practical surgery in the triennial period prior to June, 1890." This prize has also been awarded to Mr. Lawson Tait.

WE feel sure that the following biography of the President of the British Gynæcological Society, which appears in *The Provincial Medical Journal* for May, 1890, will be read with much interest.

C. H. F. ROUTH, M.D.—Dr. Routh is descended from one of the oldest Yorkshire families, originally called De Ruda of Routh, near Beverley. He was born in Malta on January 4th, 1822, during the residence there of his father, Commissary-General Sir Randolph Routh, K.C.B., whom he subsequently accompanied to Canada, where he began his education. As a boy, not only was he an accomplished Latin and Greek Scholar, but he possessed a special talent for mentally solving mathematical problems by some undetermined method, which he lost as soon as he was taught the usual routine of mathematics. This peculiarity explains the constant reference to statistics in most of his works. In his fifteenth year he came to England and entered as an art student at University College, London. In 1840 he joined the medical faculty, where he was a most diligent student, especially in the more practical departments of medicine and surgery, and obtained the Fellows' prize gold medal for essays in clinical medicine, reports of which were published in the *Medical Gazette*, 1845-50. It was at this College that he laid the foundation of his gynæcological knowledge, by being Dr. Murphy's first Obstetric Physician's Assistant. He qualified in 1843, and graduated with honours at the London University, taking the M.B. in 1844, and the M.D. in 1845, and at a later date he was elected M.R.C.P.Lond. In order to become acquainted with con-

tinental practice he travelled abroad, more especially at Paris, Prague and Vienna, and it was at this latter place that he became acquainted with Professor Semelweiss, whose discovery of the use and advantages of antiseptics in midwifery he communicated to the Royal Medico-Chirurgical Society when he returned to England in 1849. These views were then novel, and were at first received with some doubt, but Dr. Routh has lived to see every word that he then uttered confirmed in all particulars, and to see puerperal septicæmia practically banished from lying-in institutions. He was shortly afterwards elected to the Fellowship of the College by the Council of University College, an honour which it is well known is conferred only upon its distinguished alumni.

His early papers related mainly to general medicine, and this was not to be wondered at, for during the first nine years of his practical work in London he was a physician to the Burton Crescent Dispensary. Amongst these early papers may be named :—"Fallacies of Homœopathy" (1852), "Mortality of Infants" (1858), "Pneumonia," "Fœcal Fermentation," &c. His taste, however, was towards gynæcology, his earliest work being one on "Procreative Power" (1850), which appeared in the *London Journal of Medicine*.

In 1859 he was appointed public orator to the Medical Society of London, and from that date papers on gynæcological subjects have repeatedly appeared ; amongst which may be noted :—"On Menorrhagia," "Early Signs of Pregnancy," "Causes of Unproductive Marriages," "Fibroids and Fibrocystic Diseases of the Uterus," "Bromine Treatment of Uterine Cancer," "Fundal Endometritis," "Diagnosis of Syphilis in Women," "Extra-Uterine Gestation," "Uterine Deviation," "Nymphomania," &c. His largest work is on "Infant Feeding," which has gone through several editions since it was first published in 1860, and has been brought out also both in America and on the continent. Some of the highest prizes in the profession have fallen to his lot. He was Lettsomian Lecturer at the Medical Society in 1864, and its President in 1875. He has held high office at the Obstetrical Society of London ; and his address as President of the British Gynæcological Society, published in these pages last March, is fresh in the minds of our readers. He was one of the first physicians of the Samaritan Free Hospital, and, with Dr. Savage (its founder) and Sir Spencer Wells, was one of the first to perform ovariectomy at that institution, of which he is now, after twenty-six years of active hospital work, one of its Consulting Physicians.



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WEDNESDAY, MAY 28, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 18 Fellows, 4 Visitors.

The following was elected a Fellow of the Society:—Dr. O. Sullivan.

The following were proposed for election:—Dr. Robert Milne Beaton, London; Dr. George Septimus Rennie, Hamilton, Ontario, Canada.

On the Diagnosis and Treatment of Metrorrhagia. By ARTHUR W. EDIS, M.D.Lond., F.R.C.P., Senior Physician to the Chelsea Hospital for Women, late Obstetric Physician to the Middlesex Hospital.

Every one engaged in the daily routine of practice must frequently have met with cases of uterine hæmorrhage which puzzled him not a little, both as to their diagnosis and treatment, caused him much anxiety and worry at the time, and possibly did not enhance his reputation in the estimation of

his patient and her friends. With the hope of throwing some light upon the nature of these obscure cases I offer the following remarks, trusting they may prove of service in raising a discussion upon the subject.

When we remember that of all the organs in the body the uterus is the only one from which blood flows as a physiological process, we shall not be surprised to find that this function is influenced by many and various conditions, both general and local, and is often a symptom of the most varied affections.

Uterine hæmorrhage must not be regarded as a disease or entity *per se* for which one method of treatment is universally applicable, otherwise we shall fail in our efforts to afford relief and often do more harm than good. Nor must we regard hæmorrhage from the uterus as an invariable evidence of disease, for it may be merely an expression of constitutional or general vascular tension, the uterine mucous membrane acting, so to speak, as a safety valve, a smart attack of hæmorrhage often serving to avert a still more serious effusion from the ovary or its surrounding plexus, into the peritoneal cavity, or even an attack of apoplexy at the so-called climacteric period, the uterine hæmorrhage being beneficial and often affording us a useful hint as to treatment.

A correct diagnosis is the first and most important element of successful treatment, for until we have arrived at a rational conclusion as to the former, the latter is but mere guess work, and we are as liable to do harm as good in attempting to repress the hæmorrhage by ordinary routine treatment. The principle of diagnosis by exclusion is one which approves itself to many, and for general purposes is to be commended, determining in fact to what cause the hæmorrhage is *not* due. This of course can only be done by knowing beforehand what are the most likely causes of severe uterine hæmorrhage—the *possibilities* so to speak—and then eliminating one after the other until we have left only two or more *probabilities*. It is of great importance to get as clear and concise a *history* of the attack as possible.

Before even attempting to make a local investigation of the pelvic organs we should be careful to exclude any general constitutional conditions such as are not infrequently met with from impairment of the function of the heart, liver and kidneys, aggravated, it may be, by the injudicious employment of alcohol which had been prescribed with a view to relieving the more distressing symptoms. The gynæcologist should be, in fact, a good all-round general practitioner, with special experience in uterine disorders, not a mere specialist who can see nothing amiss in a patient except through a vaginal speculum. In young girls, more especially in large cities, where from physical overwork, tight lacing, want of proper nourishment and hygienic surroundings, we meet with instances of menorrhagic chlorosis which prove very intractable.

Some of the most difficult cases as regards diagnosis occur at or about the so-called climacteric period. Terminal floodings are by no means infrequent, a patient becomes irregular, passes over an interval of several months, and then has profuse uterine hæmorrhage. This may merely imply the lessening of arterial tension at the surface of least resistance, or may be the first indication of commencing malignant degeneration in the cervix uteri. We have no right to assume the former without a local investigation, for we may thus deprive the patient of the only chance of recovery by extirpation of the entire uterus after the method of Freund. An examination should invariably be made. In some instances, even after an interval of several years since the last confinement, the explanation will be found to be a miscarriage. I have seen several cases where this has happened and led to much unpleasantness. In a large number of patients about the climacteric period hepatic congestion, due to abuse of alcoholic stimuli, together with concurrent deposition of fat, constipation and inactivity, will prove to be the exciting causes of hæmorrhage.

Having satisfied ourselves, so far as possible, that the hæmorrhage is due to some local and not constitutional condition, we must then endeavour to determine the exact

nature of this lesion. Speaking generally, the most frequent local causes of metrorrhagia will be found to be: threatening miscarriage; retained products of conception from incomplete abortion, or retention of a small portion of placenta; subinvolution, with granular erosion or laceration of cervix; villous endometritis; hæmatocele; new growths in the form of polypi; fibroids or malignant disease of cervix or fundus uteri; retroflexion of the uterus, with or without prolapse of one or other or both ovaries. Exceptionally we must not overlook the possibility of extra-uterine gestation; cystic degeneration of the villi of the chorion; inversion of the uterus.

Any one of the causes mentioned being sufficient to cause excessive loss, it follows that a coincidence of two or more of these conditions will be still more likely to keep it up, and herein lies an important hint for treatment. A patient may be the subject of an intra-mural fibroid of the uterus for years without necessarily suffering from excessive loss, but if as not infrequently happens, the endometrium becomes affected with villous degeneration, metrorrhagia often becomes a marked symptom.

Where hysterectomy is not deemed advisable, or the patient refuses all idea of an operation, curetting the uterine cavity or applying some strong styptic may effectually prevent the recurrence of profuse hæmorrhage and thus prove of much service in removing the symptom for which we were consulted. Again, a patient may have had a fibroid tumour for years without any very urgent symptoms, but errors in diet and undue stimulation by alcohol may induce severe hæmorrhage; careful attention to the former, and abstention from the latter may make all the difference as to the loss incurred.

Treatment.—A correct diagnosis being the first and most important element of treatment, it follows as a matter of course that having ascertained the cause we know then what our plan of action should be. Still there are some few practical hints which may be found of value.

Where the hæmorrhage results from constitutional or general condition, it is not always wise to attempt to check the flow at once, unless it is producing such an effect upon the system generally as to suggest the expediency of arresting it at all hazards.

In certain cases of heart disease, moderate uterine hæmorrhage, in place of aggravating, seems to relieve the cardiac symptoms, and should not therefore be hastily repressed.

Strophanthus, *digitalis* and *aconite*, by depressing the heart's action and diminishing the frequency of the pulse, relieve hæmorrhage in these cases more than any other remedies, combined or not with iron as may be deemed expedient.

Where the action of the liver seems to be at fault, attention to diet, abstention from alcohol, encouraging the action of the skin and the administration of a few grains of calomel or pil. hydrarg. or euonymin followed by a brisk saline aperient, will probably be indicated.

If albuminuria be present, or the kidneys seem to be at fault, encourage vicarious action of the skin and bowels by means of diaphoretics and purgatives, and treat the case upon its merits.

In cases of menorrhagic chlorosis, bromide of potassium in half-drachm doses has proved of service, iron being given between the periods with strychnia.

Where uterine hæmorrhage persists, no assignable cause for it, such as malignant disease of the cervix, fibroid, inversion, or pelvic hæmatocele being detected, and the ordinary remedies such as ergot, gallic acid, hamamelis, *cannabis indica*, sulphuric acid, abstention from alcohol, regulation of the bowels, rest, &c., fail to check or arrest the flow, we should, without further delay, dilate the cervix and explore the interior of the uterus. Numerous instances have been recorded of patients dying from uncontrollable hæmorrhage where a post-mortem examination revealed the existence of some intra-uterine growth, such as a polypus or sub-mucous fibroid, retained product of conception or fungoid condition of the endo-

metrium, which could readily have been removed had appropriate measures been adopted in time, and the patient's life thus saved.

The mere fact of inserting a sponge tent into the cervix uteri arrests the hæmorrhage for the time being, and facilitates subsequent exploration of the uterine cavity. Plugging the vagina is a very unscientific procedure, as well as being unsatisfactory and inefficient. It should seldom, if ever, be resorted to. As to any risk of reflux through the fallopian tubes, when the cervix is plugged, it is merely visionary, provided, of course, appropriate cases only are selected.

It would clearly be impossible in these brief remarks to indicate in detail the methods of local treatment, such as curetting for villous endometritis, removing polypi, operating for cancer, applying the positive pole to the uterine cavity and employing electrical currents as now practised in cases of fibroid tumour, remedying displacements of the uterus by appropriate supports, &c. The treatment of incomplete abortion alone would occupy a whole evening, to say nothing of extra-uterine gestation or inversion of the uterus.

Even where early utero-gestation has been clearly diagnosed and hæmorrhage occurs from partial detachment of the ovum, we should still give ergot to contract the uterus and suppress the flow. Many instances could be cited where pregnancy had gone on to full time under these circumstances. But if we have reason to believe that the ovum sac has ruptured and its vitality thereby destroyed, the indications are to promote expulsion and not retention.

Where the history of the case points unquestionably to a miscarriage, or where the foetus itself has been expelled, so that the diagnosis is clear, the question will naturally arise, How long are we justified in waiting for the placenta to be expelled by the natural efforts? The answer to this will depend a great deal upon the symptoms. If hæmorrhage persist we must endeavour forthwith to remove the placenta. In multiparæ this may frequently be done by placing the patient on her back, passing one or two fingers into the

uterine cavity, using the other hand externally to depress and steady the uterus by conjoined manipulation, and then sweeping out the placenta *en masse*, a little chloroform being given if requisite. It oftens happens that the hæmorrhage is arrested on the expulsion of the ovum, the uterus contracting, the placenta being retained. In these cases it may be advisable to keep the patient quiet in bed for a day or two, rally her as far as possible from the effects of the hæmorrhage, and not make any attempt to remove the placenta until it has become less firmly attached to the uterine surface.

Should the temperature rise, or the discharge become in any way offensive, or the hæmorrhage recur, we should at once proceed to remove the placenta. It is not always requisite to produce anæsthesia, but if the patient be a nullipara, the vagina very small, and the parts very sensitive, it is generally advisable to administer an anæsthetic so as to have the patient completely under control. If for any reason the practitioner fail to remove the placenta by the aid of the fingers alone, long ovum forceps should be inserted into the uterus and the mass extracted, entire or in pieces, as may be found practicable.

The hot vaginal douche has a marked influence in restraining hæmorrhage in some instances. Where the cervix uteri is sufficiently patulous to admit of the easy entrance of a tube the size of a No. 8 catheter, the injection of hot water at a temperature of 110° F. to 120° F., a vaginal speculum being employed, will often check or arrest hæmorrhage when other measures have failed. In some cases leeches or scarification will tend to arrest hæmorrhage. Where hæmorrhage persists in spite of all attempts to check it, no well-ascertained local cause having been detected to account for it, it may be necessary to swab out the uterine cavity with a strong solution of iodine, such as the iodized phenol, or even the liq. ferri perchlor. As a *dernier ressort* the insertion of a sponge tent into the cervix uteri may be effected. Removal of the ovaries in very intractable cases may often be requisite.

The reliable remedies at our disposal for checking or arresting uterine hæmorrhage are really very few. Ergot is unquestionably one of our most potent; combined with strychnia and cinchona its effect is often more evident. Whether given as liquid extract, infusion, ergotin in pill, or hypodermically, will depend upon individual experience and other circumstances. Hydrastis canadensis is a valuable agent and far too little generally known. In some cases of fibroid it proves even of more service than ergot. In many cases too, where apparently there is no local cause for the excessive flow, hydrastis may be given with benefit in doses of thirty to sixty minims. Hamamelis, which forms the basis of the American nostrum hazeline, has been found useful in some forms of metrorrhagia. The ordinary astringents such as gallic and sulphuric acids have really very little influence in restraining hæmorrhage, and are far too often relied upon. Quinine and strychnia, alone or in combination, will often succeed in checking or arresting hæmorrhage in those cases where the system is much depressed from repeated or prolonged losses. Digitalis combined with iron is most serviceable in those cases where the heart is at fault, and in myoma.

Bromide of potassium in cases of ovarian irritation and even in hæmatocele possesses the power of checking hæmorrhage equal if not superior to that of any remedy we possess. Chlorate of potash has lately been highly spoken of, but chiefly in combination with ergot. Opium is beneficial in cases where the loss has already been severe. It has been noted, not infrequently, that suppression of the catamenia occurs in patients who resort habitually to morphia. Sulphuric acid and opium used to be, and still are, with some practitioners favourite remedies for checking uterine hæmorrhage, and also acetate of lead and opium.

The administration of iron should never be resorted to when any foreign body is suspected to be present in the interior of the uterus. Iron is often given most unwisely, serving only to intensify the loss and aggravating materially the patient's condition. Iron is of much benefit in those

cases of menorrhagia where, from antecedent anæmia, the blood has become so attenuated as to pass readily through the capillaries. In certain cases of profuse loss from the presence of intramural fibroids, iron also proves of service in arresting hæmorrhage. But where any portion of placenta be retained, or any evidence of an intra-uterine growth be present, iron should, as a rule, be carefully avoided, as it serves to increase any uterine congestion already existing.

The narration of a few carefully-selected cases will possibly impress more forcibly upon the mind of the practitioner the difficulties of the subject than any mere general remarks, and for this reason I proceed to give some which have occurred in my own practice.

Pelvic Hæmatocele.—E. L., aged thirty-four. Married six years. Mother of one child five years old. First menstruated at the age of sixteen, the catamenia being regular, generally lasting five days unattended by any discomfort. Five weeks since just before a period was due, she chased a friend round the garden, and in the evening had severe pelvic pain, worse on the left side, extending down the thigh and radiating round to the sacrum. Hæmorrhage set in shortly after this, and the pain lessened in severity. She passed a few clots, accompanied by forcing pain. The pulse was quick, and the temperature over 100°F., and she was obliged to keep her bed. Her general health became much impaired, the appetite failed, the bowels were constipated, and her aspect was that of marked constitutional disturbance. On examination the uterus was found pushed over to the right side of the pelvis by a firm circumscribed mass of deposit, occupying the left and posterior portion of the pelvis, extending up to the pelvic brim, where it could be felt on conjoined manipulation.

Attention to diet, regulation of the bowels, abstention from stimulants, administration of a mixture of bromide of potassium with cinchona, with perfect rest for several weeks in bed, enabled nature to recover herself, and the patient ultimately convalesced perfectly.

Villous Endometritis following miscarriage. Curetting. Recovery.—M. S., aged forty. Married three years. Always enjoyed most excellent health before marriage. Six months after marriage miscarried at end of second month, from which she recovered. Six months later a second miscarriage took place, and since then she has never been thoroughly well. The periods at first were rather prolonged, but not irregular. Some few months later serious hæmorrhage took place, and liq. ferri perchl. was applied. This succeeded for a time in arresting the loss, but then hæmorrhage became more or less constant, absent for a week or two, then suddenly beginning again. In August, 1885, there were bursts of hæmorrhage every two or three days, with watery discharge in the intervals—never at any time any pain of any moment.

When first seen in November, 1885, the uterus was found to be somewhat bulky, normal in position, mobile. The cervical canal was granular. Nothing else abnormal was detected. Efforts had been previously made to dilate the cervix uteri with tents, but such violent expulsive pains were produced that it was given up. There was nothing in the condition of her general health to explain the persistence of the hæmorrhage. The heart, liver and kidneys seemed to be performing their functions normally. She took no alcohol. No enlargement of the ovaries or evidence of fibroid could be detected.

The cervix uteri was dilated with laminaria tents, and the cavity of the uterus curetted and swabbed over with a strong solution of iodine. The scrapings were submitted to an experienced microscopist, who reported "that they were without doubt malignant, probably sarcomatous, but not very rapid growing."

The patient rapidly convalesced and returned home. Her husband wrote to me in February, 1886, three months after the curetting:—"There has not been the slightest hæmorrhage of any kind so far, not even any return of the ordinary menstrual period." Again in September, 1887, nearly two years subsequent to the operation, he wrote, saying, "I have

now the great pleasure of informing you that my wife keeps very well. The pain in the side she used to complain of is now entirely, or almost so, gone. The periods are nearly regular as regards time, and quite moderate in quantity. Her general health has quite recovered itself."

On examination the uterus was found to be perfectly normal in every way. Previously to my seeing her the case had been regarded as one possibly of malignant disease of the fundus uteri, or polypus. When last heard of, in 1889, the patient was quite well, and had had no return of the hæmorrhage.

Menorrhagia. Retained Placenta following miscarriage at about the four-and-a-half Month. Removal. Recovery.—M. T., aged thirty-nine. Married nineteen years. Mother of twelve children. When about four-and-a-half months pregnant experienced a sudden shock, which induced a miscarriage. She lost a great deal of blood at the time, the hæmorrhage continuing rather freely for the first fortnight, when it abated somewhat, but recurred again at the end of the month and continued on and off for the space of fourteen weeks. During the whole of this time the patient remained in bed, and was plied freely with brandy and port wine to keep her strength up.

On examination the uterus was found to be considerably enlarged, the fundus uteri being detected above the pubis, the cervix bulky, the os uteri patulous, admitting the finger. On exploring the interior of the uterus a rough, irregular mass of the consistence of placenta was felt firmly adherent to the fundus. By the aid of conjoined manipulation a large portion of the mass was removed, the ovum forceps being also employed. By these means as much placenta as would fill a tea cup was extracted. The uterus was washed out with hot water, a binder applied, ergot and opium administered, and nourishment given at short intervals. No anæsthetic was needed, nor was there any hæmorrhage of any moment. The placenta was perfectly fresh, not the least offensive odour being perceptible. The patient made a tedious but satisfactory recovery.

Remarks.—The fact of the patient having had a miscarriage should have led to an early examination and removal of the placenta. The case at one time was likely to prove of medico-legal interest, inasmuch as an action for mal-praxis was threatened, but subsequently compromised by the practitioner. It is worthy of note that the placenta was perfectly fresh after remaining in the uterus for the space of fourteen weeks after the expulsion of the foetal portion of the ovum.

Retention of blighted ovum. Hæmorrhage. Dilatation. Extrusion of ovum. Recovery. K. M., aged twenty-nine. Married eight years. Four children, youngest two and a half years. Two miscarriages. Patient stated that the catemenia had been regular up to the time of her leaving her husband abroad five months since. During the voyage home they did not appear, and she thought therefore she must be pregnant. She missed two periods, but on arriving in England began to suffer from an intermittent sanguineous discharge which would often disappear entirely during the night but come on again so soon as she began to get about. She did not suffer from morning sickness or any of the ordinary symptoms of pregnancy, but experienced much inconvenience from back-ache and aching pain down the thighs.

Ergotin in pills was administered but without checking the hæmorrhage. Her general health began to suffer, she became emaciated, the mammæ flaccid, the appetite capricious, her spirits very depressed, and her condition generally caused much anxiety to her friends.

On examination *per vaginam* the uterus was found to be bulky, mobile, globular in form, the fundus uteri extending up above the pelvic brim. The cervix was enlarged and fissured, the anterior lip excessively bulky and granular, somewhat softer than normal, not at all characteristic of malignant degeneration. There was no lividity of the vagina, as usually noticed in pregnancy, nor did the size of the uterus at all correspond to what one would have expected to find at the fifth month of utero gestation.

The probability of the ovum being blighted and retained in utero seemed to be the only theory which would accord with her present condition and symptoms. As her general health had become so much impaired it was deemed prudent in any case to dilate the cervix and explore the interior of the uterus. This was done by means of laminaria tents, when uterine action ensued, and a shrivelled ovum of about two and a half months' development was expelled entire the following day. The hæmorrhage ceased from this time, and the patient ultimately made a good recovery.

Profuse hæmorrhage from partial abortion. Removal of portions of adherent placenta. Recovery.—M. R., aged thirty-seven. Married four years. Mother of two children, youngest seventeen months. Stated that she had been flooding on and off for a whole month. Having missed two catamenial periods she suddenly commenced to lose bright blood *per vaginam*. Some few days subsequently she experienced severe labour-like pains, passed large clots, and was obliged to rest up in bed. Three or four days later she passed some lumps and since then has been losing blood almost continuously if she attempts to sit up or move about, the loss checking materially during the night.

On examination the uterus was found to be excessively bulky, mobile, fairly normal in position, the sound passing upwards and forwards about three inches, causing a sharp flow of bright blood so persistent as to need the insertion of a sponge tent within the cervix uteri in order to check it. There being scarcely any doubt but that some retained portion of placental structure was present in utero, chloroform was administered three hours later, the tent removed, and the interior of the uterus explored. By the aid of ovum forceps and the sharp curette several portions of placenta were removed, the cavity of the uterus was washed out with hot water and then swabbed with strong tincture of iron. From this time the hæmorrhage checked. The patient was much reduced by the continuous drain upon her system extending over a month. Ergot and bark were given freely,

and in a few weeks' time the patient was enabled to leave her bed and ultimately made a good recovery.

Sixteen months after the date of operation she again presented herself, stating that she had been losing blood at irregular intervals for the last two months. In September and October the catamenia appeared at three weeks' interval; she then went a little over the month when bright hæmorrhage occurred. Pain in the back and down the insides of the thighs was present. Severe rigors, both day and night, came on, extending over a period of at least three weeks, during which time the vaginal discharge was sanguineous and often very offensive.

On examination the uterus was found to be retroverted and enlarged to about the size of two months' utero gestation. Cervix healthy, normal in appearance, not soft or congested.

The history pointing clearly to an imperfect abortion, the size of the uterus not corresponding with the period of pregnancy—the patient assuring me that if pregnant she must be at least four-and-a-half months advanced—a laminaria tent was inserted and the cervix dilated.

On exploring the interior of the uterus several portions of placental structure were removed by the aid of the curette and ovum forceps. The uterus was well irrigated with hot water, and then swabbed out with iodised phenol.

The hæmorrhage checked from this date, and the patient convalesced perfectly.

Fibroid tumour of uterus. Fungoid vegetation of endometrium.—L. W., aged forty-five, mother of one child, aged twelve; began about three years ago to have frequent floodings.

The catamenia commenced at fourteen, were fairly regular, but for several years past had been very profuse. During the last three years she was seldom clear from sanguineous discharge for more than two days at a time. Any exertion brought on profuse hæmorrhage, so that she was compelled to keep resting up almost constantly; of late she had become so emaciated, nervous, hysterical and irritable that it was feared she would go out of her mind.

On examination the pelvis was found to be occupied by a dense, firm, globular tumour about the size of a foetal head. The uterus was retroflexed, the cervix patulous, and protruding from the os uteri was a small mucous polypus.

As the fibroid was known to have been in existence for many years, and the hæmorrhage lately had been profuse, it was deemed expedient to dilate the cervix and explore the interior of the uterus with a view to determine the question of enucleation of the fibroid, and to discover if possible whether any additional cause for the hæmorrhage existed. Laminaria tents were inserted, and the cervix dilated sufficiently to permit of the introduction of the finger.

The fibroid was found to be external to the uterine cavity, this latter covered with fungoid vegetations. The sharp curette was employed, the patient being under the influence of ether, and a mass of vegetation scraped from the endometrium. Little or no constitutional disturbance ensued beyond distressing sickness, due probably to the effect of the ether in her exhausted condition. She rallied fairly well from the operation, and was able to leave for the country within a month from the time of operation. The immoderate hæmorrhage checked from this time, and when last seen the patient had had no return of the severe losses. The fibroid appeared to be *in statu quo*.

Fibroid Polypus extruded from uterine cavity blocking up vagina, leading to supposition of epithelioma uteri. Profuse hæmorrhage. Continuous offensive discharge.—N. F., aged forty-two. Married nineteen years, mother of five children, youngest eight years old. Two miscarriages years ago. Patient commenced menstruating at fourteen, and was fairly regular except when pregnant and suckling, up to the date of last confinement. Some two years or so after this the period became more profuse and also more painful than she had ever been accustomed to.

About two and a half years ago, whilst unwell, she went for a long walk and had then to stand some hours. The loss was very profuse, and she was seized somewhat suddenly with

severe forcing pains in the lower abdomen, which ceased rather abruptly, the patient feeling as if "something had come down." From this date she had a more or less constant watery discharge, at times sanguineous, especially after coitus. She consulted a medical man, who prescribed a mixture for her but made no examination. Obtaining little or no relief from treatment she took no further steps in the matter, thinking it might be "the change of life." The dragging pain in her back diminished in severity and frequency, but her general health gradually became markedly impaired. She was compelled to rest up during her periods as the loss was so great, the discharge being at times very unpleasant in odour. A female friend of the patient, who had been a nurse for some years, informed her that she was suffering from cancer of the womb, and the patient accepted her fate with resignation. She refrained from seeking further medical advice for fear she would have to undergo an operation. Her health ultimately became so impaired from the almost incessant hæmorrhages that her husband insisted on her seeing a medical man. An examination was made and the patient's suspicion of cancer confirmed. Some application—presumably perchloride of iron—was made "to the womb" to check the hæmorrhage, and a tonic mixture prescribed. Some months after this I was asked to see her. She was then extremely anæmic, the eyelids puffy, the lips blanched, the heart's action quick and tumultuous, and in fact she had every appearance of being in an advanced stage of cancer.

On examination *per vaginam*, just within the vulva the finger encountered a firm, smooth, irregular nodular mass not sensitive to the touch. The impression at first conveyed to the finger was that of a fungating mass of epithelioma; on more careful manipulation, however, it was impossible to find any central depression corresponding to the os uteri; the mass did not bleed so readily as usually observed in cases of epithelioma, nor did the structure seem so brittle or friable. Passing the finger carefully around the growth it was found to be separable from the vaginal *cul-de-sac*.

On pressing the finger firmly to one side and upwards I succeeded in getting beyond the mass blocking up the vagina, and discovered a firm smooth ring of healthy cervix uteri, surrounding what proved to be the neck of the polypus.

The growth was adherent to the vagina on one side, for about a third to a quarter of its circumference. The adhesions were torn through carefully with the finger, so as to allow the wire of an *ecraseur* to be passed over the growth. The polypus was by this means slowly removed; no hæmorrhage of any moment occurred, nor beyond the inconvenience caused by manipulation was any pain complained of. The patient bore the operation fairly well without any anæsthetic.

Ergot with iron and quinine were prescribed; light and nutritious food administered with suitable stimulants, and the patient ultimately made a good though somewhat tedious recovery, and is now, nearly three years from the date of operation, in good health and has "seen nothing" since the operation.

The polypus on examination gave every indication of having been at one time an intra-mural fibroid, which had become gradually extruded towards the mucous surface and ultimately expelled through the cervix uteri, remaining there for over two years and a half.

Dr. FANCOURT BARNES said that the cases mentioned by Dr. Edis seemed to bear chiefly on the conditions of the retention of products of conception. He had no doubt that in the large majority of the cases of metrorrhagia, *i.e.*, cases where bleeding was going on continuously, the hæmorrhage was due to this cause. He recently had two cases in one ward at the Chelsea Hospital for Women. One was that of a woman aged forty, who had been losing for nine or ten months continuously. She was very anæmic, and was altogether in a very unsatisfactory condition. The cervix was dilated by laminaria tents and the uterus curetted by means of the finger. A method which he always preferred to the curette when possible. The finger was more sensitive, and by pressing down the fundus of the uterus they could tell exactly

what they were doing. He removed a large mass of placental tissue and the hæmorrhage ceased, the patient making an uninterrupted recovery. There was another patient in the same ward with practically the same history; she had been losing blood for eighteen months; her age was thirty. He dilated the cervix in the usual way and curetted as above. For two weeks she was much better, but then the hæmorrhage recurred so that he was obliged to curette a second time, on that occasion using the blunt curette as well as the finger. She was again relieved and he thought he had removed everything, the placental tissue remaining in the uterus. He was however deceived, for the hæmorrhage recurred after a few weeks, and she was so bad that in his absence Dr. Edis had kindly seen the case and had removed what he considered to be the remainder of the placenta. He too, however, was deceived. She had no more hæmorrhage to speak of for some time, but she developed symptoms of septicæmia to which she succumbed. At the post-mortem examination they found another mass of placental tissue still remaining in the uterus. These two cases were extremely interesting as showing that like all other operations cases of curetting might be easy or difficult; just as they might get an ovariectomy which could be done in ten minutes or might take them two hours or more, so it was with these cases of curetting. There was another class of the cases which had come under his notice—cases of metrorrhagia in which, so far as the history of the patient went, there could be no suspicion of pregnancy. He had at present under his care a lady who had suffered from metrorrhagia for five years. He had not curetted, because he was certain that she had not been pregnant. He had applied nitrate of silver, Paquelin's cautery, and other medicaments. But the result had been simply *nil*. He asked what he could make of a case of this kind.*

* He had since removed both ovaries from this patient with the result of arresting the menorrhagia.

The PRESIDENT asked whether after curetting with the finger he had applied iron or iodine.

Dr. FANCOURT BARNES said that it was his invariable practice to wash out the uterus with a solution of iodine at the end of the operation, and to apply iodine to the interior of the cavity for a fortnight or so afterwards. The case in which Dr. Edis and himself had operated conjointly was the only one which he had known to succumb. That case pointed to one of the difficulties in these operations, and he pointed out that they could never know for certain whether they were curetting the uterine wall or a piece of adherent placenta.

Dr. MANSELL MOULLIN observed that though there was nothing very novel in the paper, the subject was one of such extreme importance that it was well for it to come under their consideration from time to time. Dr. Edis had given them a few practical suggestions in respect of the method of treating these cases. In the first place no hæmorrhage, when profuse or prolonged, should be disregarded, the first thing being to ascertain its cause. This cause might be either general or local, and in order to ascertain this point it was necessary to make a vaginal examination. This failing to afford the information required, it might be necessary to proceed a step further—to dilate and explore the cavity of the uterus. It was unnecessary for him to recapitulate all the various disorders giving rise to hæmorrhage that might present themselves in that situation. He mentioned that he had met with several cases of hæmorrhage in elderly women in whom the menopause ought to have taken place some years previously, that is, in women from fifty to fifty-five years of age. Periodical hæmorrhage had been so profuse as to reduce them to an extreme state of anæmia and debility. In these cases the resemblance to malignant disease was very great. He had found the uterus usually in a condition of subinvolution, retroverted and partially prolapsed. This, no doubt, kept up a congested state of the organ, preventing the atrophy which ought naturally to take place. The mucous membrane in these cases was probably in a large measure replaced by

unhealthy granulation tissue. It was well to bear these cases in mind when called upon to express an opinion where malignant disease was suspected. At the opposite extreme of life the first appearance of the catamenia was sometimes attended by excessive hæmorrhage; fatal results had even been recorded, though he had never seen such a case. Fortunately the condition was one which tended to right itself, but if the symptoms were persistent and of an alarming nature, they would have to be guided by the same rules as in other cases—anæsthesia, if required, examination of the uterus, followed by suitable applications to the interior. One of the worst cases of uterine hæmorrhage he remembered having seen was at Soho. For the following brief notes of the case he was indebted to Dr. Carter, under whose care the patient was.

The patient, A. N., was a single woman aged twenty-three. Menstruation commenced at fifteen, slight but regular. She had been feeling malaise for twelve months, and had noticed an increased flow at the periods for the last four months. The last period had been preceded by severe pain for a week, when it was relieved by the appearance of clots. The flow continued very freely for fourteen days, then lessened, and for two or three days stopped. She got up and the flow returned and continued profusely for another fourteen days, when she came into the hospital. The patient was very anæmic. On examination the os uteri was blocked by a mass of clots. Hæmorrhage continuing with clots six days after admission the uterus was curetted and a few small pieces of thickened mucous membrane removed. For three days the patient did well; no coloured discharge beyond a slight dark brown one. Then a rise of temperature occurred, hæmorrhage recommenced and became continuous, several large clots being passed. Plugs were used at times, but nothing stopped the bleeding, the plugs being pressed down by the clots. The pyrexia increased, running up to 106°. On the tenth day after the operation the patient, who was extremely weak and exhausted, died suddenly of syncope. At the *post-mortem*

nothing was found in the uterus to account for hæmorrhage. The cause of death was purulent peritonitis. Some of the characteristic marks of pernicious anæmia were found.

Dr. HUGH FENTON said the paper was a very fitting rider to that contributed by Dr. Lycett and read at a previous meeting. It was a branch of gynæcology which was continually cropping up—this question of the diagnosis and treatment of metrorrhagia. He feared that it was often made a matter of treatment and not diagnosis. It seemed very unfortunate that again and again either the obstinacy of the patient or a lack of moral courage on the part of the medical attendant prevented a proper examination being made in cases of metrorrhagia, in which everything depended on a full and complete examination, not only *per vaginam*, but sometimes of all the organs of the body. In nine out of ten cases vaginal examination was altogether omitted. Some of the cases related by Dr. Edis showed how frequently perfectly preventable hæmorrhage was allowed to go on for want of a proper examination in the first instance. Each case required to be diagnosed and treated on its merits. He called attention to the cases of villous endometritis; there was nothing to show for the hæmorrhage. The uterus was normal in appearance and size; they might dilate and curette, and yet they were often none the forwarder. Sometimes the hæmorrhage ceased suddenly, and this might occasionally follow treatment, and the last treatment receive the credit for it. He asked Dr. Parsons whether he had treated any of these cases by electricity, and if so, with what result? He remembered two cases which had caused an infinity of trouble to different practitioners; one of them had passed through the hands of Dr. Edis and had been in the Chelsea Hospital for weeks under his care; all the routine things had been done; she also had sojourned in the London Hospital for three months, and still the hæmorrhage went on. He subsequently removed the ovaries and tubes and the hæmorrhage had ceased from that day, and she was now alive and well. He had only found a long sausage-shaped uterus folded upon itself. The patient was the

mother of one child. The tubes and ovaries were perfectly healthy. Another case was that of a single woman of about the same age, thirty-five, with no children. She became the subject of alarming hæmorrhage for which he could never find the slightest reason; she had consulted several medical men and had been an in-patient under Dr. Champneys at St. George's without any relief. Here too he had removed tubes and ovaries and the hæmorrhage had ceased, though the appendages and the uterus appeared perfectly healthy. She did wonderfully well and never lost another ounce of blood. He suggested that it would be well to try the continuous current in these cases, in the hope of avoiding such strong measures as oöphorectomy.

Dr. HEYWOOD SMITH said that apart from the cases of malignant disease and fibroids, there were no cases of hæmorrhage of which one saw more than those due to retained products of conception. He observed that all cases did not require to be widely dilated by tents in order to effect a cure. It was important to make sure, however, that there was no small fragment left, and he had found the application of the solid nitrate of silver to the entire surface of the uterus very beneficial. He asked Dr. F. Barnes what was the exact position of the piece of placenta found *post-mortem*. He asked whether anything had been detected with respect to the ovaries or oviducts. (Dr. F. Barnes said they were healthy.) The oviduct was often long and convoluted. In some cases of fibrous tumour it might be advisable to try the continuous current, but he would mention that in one case in which he had tried it it appeared to have started a hæmorrhage which had not existed before.

Dr. FANCOURT BARNES said he could only repeat that some cases were easy and others were difficult. He had merely mentioned the case to show that it was sometimes very difficult to differentiate between a piece of placenta which had become almost a part of the uterine wall and the uterine wall proper.

Dr. BARNES expressed his approval with Dr. Edis's mode

of attacking the subject. There was nothing more useful than to take a symptom and then to trace out its causes. If they attempted the analysis of cases of menorrhagia they would go through almost the whole range of female pathology. He would not refer to cases of hæmorrhage due to retained products of conception, but he would say a word or two about two other forms. Dr. Edis had touched on one, namely, the hæmorrhages which occurred at the menopause or afterwards. In these there might be no trace of disease in the pelvic structures, and yet there was recurrent hæmorrhage. He would recall another fact which not seldom occurred in women of that age, viz., profuse epistaxis. That pointed to a constitutional cause, heart disease or some disturbance of the circulation symptoms which were relieved by the hæmorrhage, uterine or otherwise. The term vicarious menstruation applied to these cases was not altogether appropriate, but it showed clearly that they must look beyond the pelvic organs in order to unravel the mystery of some of these cases. The hæmorrhage from the nose might furnish an indication for treatment, and he had seen the balance of circulation restored by venesection or leeching. If they took the other extreme of life, the commencement of ovarian activity and emotional affections, they sometimes met with the most tremendous hæmorrhages. He had seen one or two cases that had terminated fatally. He saw a case at Brighton some years ago in which the patient had a very narrow escape. Of course when one met with these cases in young women, one's first thought was to suspect pregnancy, but in this case he was enabled to say that it was not so. He had succeeded in arresting the hæmorrhage by local measures. The great thing was to get a diversion of the blood from the uterus, whence it escaped. In one case transfusion had saved the patient. The cases which were independent of local uterine or ovarian disease were also of extreme importance. They knew that taking away the ovaries in cases of hæmorrhage due to fibroid would sometimes stop not only the hæmorrhage but the growth of the tumour. He had seen cases of

that kind, and it must be looked upon as a last resource in these cases. They must devote themselves to the consideration of these cases which were independent of any local disease. He maintained that gynæcologists were far less open to the reproach of not looking beyond the pelvic organs than were surgeons to the charge of neglecting these primary organs which were the ruling power in women.

Dr. INGLIS PARSONS said he had had two patients, supposed to be suffering from a malignant disease, sent to him for the electrical treatment. In one case in which there was a good deal of hæmorrhage and pain, Dr. Edis had seen her, and on passing the speculum he had seen a small polypus protruding from the cervix. The uterus was fixed and that, with the bleeding and pain, might give rise to the supposition of malignant disease. He had had another similar case, and in both the fixation of the uterus was apparently due to pre-existing parametritis. Both patients were getting well on merely local treatment. He had a case of severe menorrhagia for which no cause could be found, the patient could not take ergot or iron, and her circulation was very feeble; in that case hot water douches had diminished the hæmorrhage. He would have applied the positive pole but the patient would not allow any local treatment beyond the douches.

In answer to Dr. Fenton he said he had not had the questionable advantage of making a *post-mortem* examination after using the constant current, though this had occurred in one case after the interrupted current. He mentioned three cases treated by the constant current in which permanent relief had been recorded. He suggested that the positive electrode had a better action than that of ordinary caustics. He said that he had a good many cases of fibroids treated by electricity which he should one day publish. He quoted one case sent to him by Dr. Edis in which all kinds of treatment had been tried. It had the effect of stopping the hæmorrhage and she was practically free for two years, but recently she had had one profuse attack. He urged that operating surgeons should

not allow their judgment to be obscured by the knife. He himself often sent cases to the surgeons which he thought were unsuitable for the electrical treatment. He mentioned a case sent to him by Dr. Fenton of a patient aged forty-three, who had a well-marked fibroid and profuse hæmorrhage. In that case the current kept the hæmorrhage in check provided it was used about once a week, but not otherwise.

Dr. BANTOCK observed that the subject of the paper was such a wide one, and hæmorrhage was a symptom due to such a variety of conditions, that the discussion necessarily resolved itself into the details of the treatment of particular conditions. Dr. Edis had very well covered the ground with the exception of a small group of cases subsequently dealt with by Dr. Barnes, namely, the cases of menorrhagia in very young subjects. In these cases it was impossible to find any appreciable local disease, and they were restricted to constitutional treatment. Constipation very frequently coincided, and saline chalybeate aperients, followed by iron and ergot, usually brought about the desired result. There were, however, cases in which this treatment was of no use, and the patient might even die. Some years ago there was a case of this kind at the Dorset House branch of the Samaritan Hospital. One condition to which Dr. Edis had given great prominence was that of menorrhagia and metrorrhagia due to retained placenta. He mentioned incidentally the curious facts that in one case the retained placenta was perfectly free from any sign of decomposition for a considerable time after the initial symptoms had set in. He had frequently observed, in more recent cases than the one referred to, that when a portion of the placenta had been actually protruding from the os, that part of it was decomposed while the upper part, particularly that near the adhesion to the uterine wall, was perfectly free from decomposition. That appeared to be due to the preservative action of the alkaline secretion of the uterine cavity, and the decomposition was set up by the mixture of the alkaline secretion with the acid secretion of the vagina. It frequently happened that the placenta was only retained by a small pedicle. He

agreed that the best curette was the nail of the index finger, but he could not agree that the blunt curette was preferable to the sharp curette, the spoon curette being that which he preferred. He could not see what use a blunt curette could be, particularly following the finger. He did not think that there was a more useless instrument than the ovum forceps, for in removing an adherent ovum the portion grasped was sure to tear away, the only plan being to separate it as in ordinary cases of adherent placenta, by means of the finger. He insisted upon the beneficial effect of the tincture of the muriate of iron, when symptoms of pyæmia declared themselves, given in doses of from ten to fifteen minims every two or three hours. Several times he had seen cases with marked symptoms, rigors, &c., in which immediate relief followed special treatment, and he mentioned several cases in which recovery had followed. Dr. Edis objected to the administration of iron in certain of these cases, but that did not correspond with his experience, for his sheet-anchor in all such cases was iron, especially in combination with ergot. He observed that large doses of ergot might increase the hæmorrhage, when ten-minim doses would diminish it. With regard to the administration of bromide of potassium, he said that he had tried it years ago but had quite given it up since; it seemed to conduce to, rather than check, the hæmorrhage. He had not much faith in hydrastis, digitalis, nux vomica, hazeline, &c. He quite agreed with Dr. Edis that sulphuric acid, gallic acid, &c., were of very little use; the great thing was a correct diagnosis, and this was sometimes impossible. He trusted that it would not often occur that cases of advanced epithelioma of the cervix would be diagnosed and treated as retroversion of the uterus.

Dr. EDIS, in reply, thanked the Fellows for their remarks. His object had been to promote a discussion on a subject of great practical interest. It was a well-worn subject, and was after all only a symptom, but when patients came complaining of hæmorrhage the practitioner had to attack the question

from this standpoint. He could not of course say anything new on such a topic, but the excellent discussion which had followed was a sufficient justification for the paper. In reference to Dr. Fancourt Barnes' case upon which he had operated, he mentioned that the patient was very ill at the time, her temperature when placed on the operating table being over 104° F. The "mass" of placental tissue described as having been found *post-mortem* was only about the size of a small filbert embedded in one cornu, and even *post-mortem* was by no means easy to identify. With respect to the use of the ovum forceps, he said they were useful in certain cases to grasp the ovum. He quite agreed with what had been said as to the value of a combination of iron and ergot. When he spoke of not giving iron he alluded to cases in which there was reason to believe that something had been retained in the uterus. That general rule he still adhered to.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, JUNE 11, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 17 Fellows, 11 Visitors.

The following were elected Fellows of the Society: Dr. G. S. Remie, and Dr. R. M. Beaton.

The following was proposed for election: Dr. J. Bolat, London.

Dr. MACNAUGHTON JONES showed a large fibroid polypus which was removed from a patient, æt. fifty. The tumour *completely filled* the vagina and had contracted extensive adhesions with the vaginal walls. In breaking these adhesions there was most severe hæmorrhage. The pedicle was with some difficulty severed with the *écraseur* and the perinæum was but slightly injured in the extraction. The patient was quite well. It was the only case of the kind he had met with.

Dr. EDIS remarked on the interesting nature of the tumour, and the mistakes made in diagnosing these very large vaginal tumours.

The PRESIDENT asked if the hæmorrhage was vaginal?

Dr. JONES replied that it was.

Fibrous Tumours of the Pelvis simulating Ovarian Tumours.

Under the care of Dr. CHAS. H. JOUBERT, Surgeon-Major, M.B.Lond., F.R.C.S., Professor of Obstetric Medicine, University of Calcutta.

The two following cases, treated at the Eden Hospital, Calcutta, are of considerable interest: firstly, from the great difficulty of diagnosis between the tumours actually found

and ovarian tumours, and secondly, from the apparent rarity of large tumours composed of pure white fibrous tissue only taking their origin in or near the pelvis. I could find no reference to any such tumours in any works of reference available in Calcutta.

1.—Subhudra, Hindoo female, age about forty years, admitted August 12th, 1888. Multiparæ, last pregnancy twenty years ago, menstruation normal, general health good. Noticed a lump in the right iliac fossa about two years ago, says it was painful.

Condition on Admission.—An unsymmetrical right-sided tumour reaching from pelvis to about four inches below ensiform cartilage, movable from side to side, but not from below upwards. Indistinct fluctuation, flanks tympanitic. Circumference of body at most prominent part of tumour thirty-three inches. An aortic impulse felt on deep pressure with stethoscope. Uterus lying below, and to left of tumour, but not separable from it; sound enters two and three quarter inches; urine normal. Diagnosed as a multilocular right ovarian tumour.

Abdomen opened by a four inch incision on August 28th, 1888. The tumour was found to be sessile on a very broad base extending from the right brim of the pelvis up to the right false ribs, and apparently also very broad from before backwards. It was semi-fluctuating to the touch, giving the impression of little fluid and much solid matter. The peritoneum was moveable somewhat over the surface of the tumour proper. The surface was of a pinkish colour. The free portion of the tumour was not adherent to anything, and projected over the pelvis into the left side of the abdomen. The uterus and the appendages of both sides were felt to be quite free from disease, and entirely unconnected with the tumour.

As it appeared to me then that no proper pedicle could be made, the removal of the mass was abandoned, and the abdominal wound closed after sponging out the pelvis and peritoneum.

The patient suffered considerably from shock, and died on August 31st, 1888, three days after the operation, without any very apparent reason.

A *post-mortem* examination showed that the tumour was growing from, and in, the sub-peritoneal connective tissue of the right side of the abdominal wall and pelvis. It was composed entirely of pure white fibrous tissue, was quite solid throughout, and weighed fifteen pounds. It might have been removed by shelling it out of its peritoneal capsule, but the result would probably have been equally unsuccessful in a patient who was unable to resist a mere exploratory operation. No septic conditions were found, only slight and very local peritonitis.

2.—Kate, Hindoo female, age about forty-two years, admitted Nov. 6th, 1889. Multiparæ, last pregnancy twelve years ago. Menstruation regular, but rather free and painful.

Noticed a small tumour in the lower abdomen about fifteen years ago on the right side. The growth to present size has been gradual.

Condition on Admission.—The tumour reaches from pelvis to within two inches of ensiform cartilage. Circumference at umbilicus thirty-five and a half inches. The outline of the tumour is somewhat irregular, but the right side of the abdomen is most occupied. The uterus pushed up to the left, almost above the pelvis, the cervix being only just within reach. The sound passes with great difficulty two and a half inches. A small flattened mass below and to left of tumour, moveable independently, is probably the uterus, but manipulation with the sound gives too much pain to allow prolonged examination.

Operation on Nov. 8th, 1889.—A four inch incision exposed a tumour of different appearance to an ovarian cyst. It was covered with a thick layer of peritoneum, which could be slightly moved over its deeper surface, and which was not omentum. The tumour had the resilient feel of a cyst, but as a mass it was more flaccid than a cyst. On passing the whole hand in and exploring the abdomen, the uterus was

found somewhat enlarged and flattened, lying to the left lower side of the tumour, high up and out of the pelvis.

The left ovary and tube were normal, but the right ovary could not be detected. The right Fallopian tube and round ligament were well seen stretched out over the mass, which was clearly in the folds of the broad ligament. There were no adhesions anywhere, but the very broad base extended from the right side of the displaced uterus to the brim of the false pelvis on the right side, or even somewhat higher. There was a slight interval between the tumour and the right side of the uterus, and the fingers could be dipped well under the tumour both back and front. The abdominal incision was extended upwards and downwards after the insertion of the trocar had proved the mass to be quite solid. With some difficulty the mass was got out of the abdominal incision. Numerous veins as thick as a finger were seen coursing over its surface. The peritoneum was then torn open in a line extending from the cæcum, which was close to the tumour above and to the right, to the angle between the converging Fallopian tube and round ligament, near the right cornu of the uterus. The tumour was shelled out with ease. Some veins and a few arteries had to be secured, and near the uterus in the depths of the broad ligament some thick tissue containing large arteries was transfixed and tied before the tumour was cut away. There was but little loss of blood, only some general oozing from the internal surface of the cavity which remained, but this was controlled by sponges. The extremities of the rent in the broad ligament were brought together by fine silk sutures, and the edges of the centre part fastened to the lower part of the abdominal wound and a drainage tube inserted into the cavity in the broad ligament. The upper part of the abdominal wound was closed with silkworm gut sutures. The right ovary and tube being healthy were not removed. Very little blood was lost during the operation, but the amount of shock was considerable. The tumour weighed twenty pounds, and was composed of pure white fibrous tissue, with a few small cysts

in places. It was carefully examined by Dr. Gibbons, Professor of Pathology. No muscular fibres or ovarian tissue was found in any part of the tumour examined. It had apparently developed from the connective tissue in the broad ligament.

The subsequent history of the case was as follows :—During the night of the 8th-9th Nov., the cotton wool round the tube had to be changed, and three and a half ounces of blood were drawn off through the tube. The temperature remained normal, but the abdomen became tympanitic. Brandy and magnes. sulph. 3ss were given every two hours.

During the 9th, eight ounces of blood in all were removed through the tube. Temperature normal, tympanitis persisted.

10th.—No further loss of blood to speak of, but persistent vomiting and tympanitis, temperature normal.

The patient died at 6 a.m. on the 11th. No rise of temperature.

Post-mortem examination at 8 a.m. on Nov. 11th :—

Edges of wound adherent, stomach much distended, intestines only slightly. No peritonitis, only slight congestion of vessels. No blood in the general peritoneal cavity. Edges and sides of the sac adherent to abdominal wall and surrounding coils of intestines by plastic lymph, and cavity of sac quite shut off from that of peritoneum. But the site of the tumour was distended by a considerable amount of dark clotted blood, though hardly sufficient apparently to account for death. The right ovary, that of affected side, quite healthy, and the right Fallopian tube found on the posterior layer of the broad ligament. Left appendages also healthy. Liver and spleen healthy. No septic conditions of any kind. Death was evidently due to the slow loss of blood from the sides and into the sac from which the tumour was removed.

Dr. BANTOCK said it was rather difficult to criticise a paper in the absence of the author, and he regretted that Dr. Joubert was not present to give them further information on one or two points. In the second case Dr. Joubert stated that

the tumour grew from the connective tissue of the pelvis. He had come down upon some firm tissue with some vessels passing into the tumour where it was necessary to apply ligatures. That would be found to be the connection with the uterus itself; he himself had exhibited several specimens from cases in which he had encountered the same conditions. He had been able to find the exact site of the connection with the uterus. Only two or three days before he had seen a patient upon whom he had operated six months ago; it was one of those cases of multiple fibromas in which he was obliged to enucleate nearly all of them, but had had to leave one in the left broad ligament, for it would have been necessary to dig down below the level of the os to get it out. It would thus have further complicated an already complicated operation. It appeared to have sprung from that part of the uterus between the layers of the broad ligament below the level of the internal os. He had no hesitation in leaving the tumour because he thought that if suppuration did take place having left the stump exposed without a *serre-nœud*, including the peritoneum, there would have been a way of escape for the sloughing tumour. Fortunately nothing of the kind occurred. The result was this, that the tumour remaining having been deprived of its full supply of blood had since undergone a considerable reduction in the size, being now about one half what it was. Another case in which unfortunately he did not follow this course was one in which the patient was already anæmic, so much so that he had to keep her several weeks in the hospital before he could make up his mind to operate. In that case he tried to remove one of these deep-seated tumours, but the woman died from shock in a few hours. These two cases seemed to him to belong to the same class. The peculiar elasticity so characteristic of soft fibroids was very marked in both of them, although Dr. Joubert said there was no muscular tissue. In some of the cases which he (Dr. Bantock) had reported, the tumour had been of the kind described as *molluscum fibrosum cysticum abdominale* appearing to contain fluid. In others it was the hard, solid variety, as

in the two cases to which he had just referred. He was not prepared to accept the explanation that they grew from the connection of the pelvis, since they had a distinct connection with the uterus.

The PRESIDENT pointed out in reference to the question of the diagnosis that the stethoscope seemed to have been used in one of the cases, and it was recorded that the heart sounds were transmitted through it. That would show that it was not ovarian dropsy, or if ovarian, a solid ovarian tumour—a comparatively rare affection. This point was very often overlooked in arriving at a diagnosis. In multilocular ovarian dropsy, moreover, percussion gave a different note according to the particular portion over which one percussed. In cases of fibroid there always was a double cardiac sound wherever and however the examination over the tumour was made. In Dr. Joubert's case the transmission of the heart sounds ought to have made it clear that he was dealing with a solid tumour.

Dr. BANTOCK said the question of diagnosis was after all an unimportant one. Every one was liable to make mistakes over and over again. So much was this the case that unless a man considered from collateral signs that the tumour was malignant, he, as a rule, felt it his duty to ignore the diagnosis, and make an exploratory incision. He therefore looked upon the discussion of the question of diagnosis as more or less a waste of time. The difficulty of distinguishing between one of these soft fibroids and a cyst was so great that probably no man with a large experience had escaped making the mistake. In the absence of evidence of malignancy it was their duty to explore. He did not feel at liberty to criticise the operation in the absence of Dr. Joubert, but he could only regret that he had not enucleated the first of the tumours, as he did the second.

Some Observations on certain Forms of Intestinal Obstruction and their Treatment. By FREDERIC BOWREMAN JESSETT, F.R.C.S.Eng., Surgeon to the Cancer Hospital, Brompton.

GENTLEMEN,—I have ventured to bring this subject before your Society, as although not strictly coming under the head of gynæcology, yet, as many of the Fellows do not limit their practice to that particular department of our Science, but are equally at home when removing a gallstone as an ovarian tumour, and when performing nephrectomy as an hysterectomy, I am sure I may be pardoned if I introduce to your notice some observations on certain forms of intestinal obstruction, more especially as the forms I am now about to discuss may complicate any operation on the uterus, or its appendages, and further, as I believe this to be a Society for the discussion of the treatment of all forms of diseases of the abdomen, equally with those strictly limited to diseases peculiar to women.

As the time at my disposal is limited, I shall in this paper confine my remarks to those acute forms of occlusion caused, first, by constricting bands or diverticula, second, volvulus.

It will facilitate discussion if I describe briefly these differing forms of obstruction.

I. *Occlusion caused by Constricting Bands, &c.*—The chief causes of such constrictions or strangulations are adventitious bands the result of peritonitis, diverticula.

And here we at once see how such condition may interest all who are in the habit of performing any of the operations connected with the uterus or ovaries, as although it is not, by any means commonly the case, yet occasionally the localized peritonitis caused by the removal of an ovarian tumour or cyst, especially when adhesions are present, may be the very means of creating those bands of lymph which may stretch from point to point, and be the cause of catching and snaring

some portion of the small intestine, or sigmoid flexure, and thus creating an obstruction.

Supposing such a band to extend from the stump of the pedicle of an ovarian cyst, or from the fundus of the uterus from whence a myoma has recently been removed, and passing from thence to the brim of the pelvis, or the wound in the parietes—how easy it is to see how a knuckle of intestine may become caught and constricted.

It is all-important, then, for us to recognise these facts, and to know that after an ovariectomy or abdominal hysterectomy, should symptoms of intestinal obstruction occur, that it may be caused in this manner.

Then again, obstruction may be caused by a localised peritonitis after either of these two operations, whereby the small intestine may become absolutely glued and matted together in the pelvis; in one such case that came under my notice a fæcal fistula was established in the vagina causing the patient the greatest possible distress and discomfort. This patient was operated upon and made a good recovery.

Another form in which obstruction of the small intestine may occur is from the fact that the toilet of the peritoneum after an abdominal section has not been properly attended to. I have heard many men scoff at the mention of the *toilet* of the peritoneum, and say that such an expression is very pretty and flowery, but that in practice all the surgeon has to do is to return the intestines, should they have protruded, and close the parietal wound, but to talk about the toilet is absurd and ridiculous, and that the intestines and omentum, if pushed back into the abdominal cavity, are perfectly well able to take care of themselves.

I heard an eminent ovariectomist once declare that the great omentum was his abomination, and was always in the way when he was performing complicated operations. It may have been often adherent to the growths he removed, and he no doubt had been at times troubled thereby, but I contend the omentum is an all-enduring and most useful mem-

brane. You may remove pieces, cut out strips, and so long as you treat it with ordinary respect it will rarely give you trouble. But far from being an abomination, it is, I contend, the greatest friend the ovariologist has, as when the toilet of the peritoneum—by which is meant, when the great omentum is carefully spread out between the intestines and the abdominal parietes, it acts as a buffer, and prevents the intestines from becoming adherent to the parietes, and so one cause of acute intestinal constriction is avoided. Any one who has had an opportunity of examining the state of things after an abdominal section may confirm this for himself, and he will find, as I found in all the experiments I conducted, and in such post-mortem examinations as I have had the opportunity of seeing after abdominal section, that invariably some part of the abdominal contents became adherent to the parietal layer of peritoneum at the seat of the incision through the parietes.

If the toilet is properly attended to the portion that becomes adherent is the great omentum, the intestines thus being left quite free, and their action not interfered with. Let the toilet be neglected, and what happens? The intestines themselves become adherent, and the risk is run, that such a state of things having taken place, a twist or a knick of the gut ensues, and the bowel becomes occluded, and the patient is put to the unnecessary risk of having the abdomen opened again, and having one or other of the operations presently to be described performed.

Methods of Strangulation.—From the above remarks it will be seen how easily a constriction of the intestines may take place. Suppose a band to extend from the pedicle of an ovarian growth and to extend to the brim of the pelvis, or from two points in the mesentery—as is often found in tubercular infiltration of the mesenteric glands—it can be readily understood how a coil of intestine may slip through or under it, and become strangulated, and under such circumstances complete obstruction must result.

Again, in the case of Meckel's diverticulum or any of those

long cord-like bands which occasionally exist, strangulation may be caused by a portion of the intestine being caught in a noose or loop, and thus complete occlusion occur.

The time at my disposal will not allow of my going into all the different forms by which the intestine may be strangulated by these bands, neither is it important.

II. *Volvulus*.—Twists of the intestine are always found in either the small intestine or the sigmoid flexure, and usually consist either of a twist upon its vertebral mesenteric axis, or with another coil of intestine; either of these forms of volvulus are not uncommon, and I believe invariably will be found to be associated with an abnormally long mesentery, or from unequal contraction of the gut, and is very much more commonly met with in young persons than in those above the age of twenty years.

Having thus briefly alluded to these two forms of intestinal obstruction, it only remains for me to discuss the best method of dealing with them, when existing, and here it is important that we should be able to decide as to the portion of intestine which is the seat of strangulation. I should like to draw your attention to the elaborate memoirs of Professor Senn, of Milwaukee, and Dr. E. Staffel, of Chemitz, on the "Surgical Treatment of Intestinal Stricture and Occlusion." Their conclusions show how the fate of patients suffering from obstruction rest chiefly on early and correct diagnosis.

In the acute forms of obstruction we are now considering it may be usually taken as a rule that the higher the obstruction the more violent is the vomiting. There are, however, other symptoms that will enable us to localise with more or less certainty the seat of occlusion, and for this purpose it will facilitate matters if we divide the intestines into three portions :

1. When the obstruction occurs in the duodenum and jejunum ;
2. When it exists in the lower part of the ileum ; and
3. When the colon is occluded.

Taking these in the order named we shall find when the occlusion is situated in the duodenum or upper portion of the jejunum the following symptoms :—

The first indication is sudden and constant severe pain in the epigastrium, followed by the most violent vomiting and retching, which continues almost persistently until the obstruction is relieved or death releases the patient. The vomited matter is *never* fæculent. There is entire absence of tympanitis, the abdomen being flat and contracted ; occasionally the stomach may be inflated, causing a fulness beneath the false ribs on the same side. As a result of the incessant vomiting the patient becomes collapsed very quickly, and death takes place speedily. The patient is troubled with intense thirst during the course of the disease ; the bowels may act regularly and flatus pass.

There is usually tenderness over the epigastrium and a fulness may be distinguishable if the occlusion is caused by a twist upon the axis of the bowel. Should the obstruction be the result of pressure from a tumour, enlarged glands, or acute peritonitis, these will be readily discovered and the course of treatment indicated.

2. Occlusion when occurring in the lower part of the jejunum or ileum is accompanied by very different symptoms. Here instead of contraction of the abdomen, meteorism exists in an extreme degree, causing great distress ; vomiting is persistent ; in the early stages the contents of the stomach are vomited ; this is followed by bilious, which is speedily succeeded by fæculent, vomiting. There is severe colicky pain, which is usually persistent, but may occur in paroxysms ; this is especially marked when stenosis is incomplete.

Pain is nearly always an early symptom ; it is often paroxysmal at first, but soon becomes constant. There is great tenderness over the abdomen ; in volvulus this is especially the case. In the earlier stages of volvulus vomiting is not so pronounced, but later on it is very severe.

The amount of collapse, although great in all kinds of obstruction, is not so pronounced in occlusion caused by volvulus as when the result of constriction by bands. Then, again, the suddenness of the attack has much to do with the amount of collapse ; in some cases the patient becomes pro-

foundly collapsed at once and never seems to rally. The pulse is small and rapid, the tongue dry and furred, and commonly frequent disagreeable eructations are present.

The temperature is usually subnormal at first and may remain so until death; even when peritonitis is present no appreciable rise of temperature takes place. The respirations are increased in frequency, which is caused by the great distension of the abdomen.

There is complete absence of stool or flatus. In nearly, if not in every case, the disease commences quite suddenly, the patient being in perfect health up to the time of attack, when suddenly he is seized with a violent acute pain in the abdomen followed by the above-named symptoms.

3. Occlusion of the colon or sigmoid flexure runs a much less acute course. The symptoms are ushered in by pain of a very severe character, and can usually be indicated by the patient; they follow slowly other symptoms. Vomiting may occur only once or twice at the beginning of the attack, or not until later, and this is rarely fæculent at first. I have met with cases where there has been no vomiting. Tympanitis at first slight, after a few days becomes excessive; there is but little collapse; there is complete absence of motion or passage of flatus, and on examining the rectum it usually is found to be empty. There is diminution in the quantity of urine, which is high-coloured and loaded with lithates.

The only portion of the large intestine which is likely to be occluded by bands or volvulus is the sigmoid flexure.

To sum up, then, in occlusion of the upper part of the small intestine the abdomen is flattened, fæculent vomiting is absent, the bowels may act for several days after the occlusion has occurred, vomiting and retching are constant, and pain is very great. In occlusion of the lower part of the small intestine the symptoms are equally distressing, but here there is meteorism and fæcal vomiting, while in occlusion of the large intestine there is distinct meteorism, total absence of the passage of fæces or flatus per rectum; vomiting in many cases very slight, but pain of a paroxysmal character is intense.

Treatment.—Now, gentlemen, we come to the all-important subject of the treatment of these cases when they are brought to our notice, and here in the first place let me enforce with all the stress conceivable the importance of *opening the abdomen as early as possible after the surgeon is sure he has to deal with obstruction*, with a view of discovering the seat of the lesion and performing such operation as is indicated for the relief of the constriction. Remember that the success in these cases depends more upon *early interference* than in any other operation in surgery. And the result of timely surgical skill is pretty well certain to be crowned with brilliant success.

What surgeon if called into a case of ordinary strangulated hernia would wait until the patient was worn out by vomiting and pain before he operated with the view of releasing the hernia? Why, then, hesitate when you know there is an obstruction in the bowel, which, although not visible to the eye or touch as is the hernia, yet to the educated mind is equally as clear?

It is true that in years gone by the results of operations for intestinal obstruction were attended with disastrous results, and the surgeon rarely attempted to restore the continuity of the gut, but was contented with fixing the distended portion of the intestine above the seat of obstruction to the abdominal wound, and forming an artificial anus. This proceeding was, however, found to be a most fatal one, and even when successful the patient's life was a burden to himself, and many a man has been known to exclaim, "Had I been aware this was the only result anticipated from the operation, I would rather have died."

It is due to Professor Senn, of Milwaukee, that intestinal surgery, from being one of the most fatal departments in surgery, may now be ranked among the most successful, and as time and experience progresses, we may look for the most brilliant results, not to be eclipsed even by those of the ovariotomist. Senn's method, which I had the honour of first bringing prominently before the profession in this country, proved so successful in the experimental research I made some two

years ago, that I have never ceased to impress the importance of his suggestions before the profession.

By adopting the use of approximation discs either in the form of decalcified bone plates by Abbe's catgut rings, or Brokaw's segmented rubber rings, for uniting two portions of the intestine and thus restoring its lumen, has proved so successful that we may at once and for ever put aside all that we have been taught respecting the care and tedious detail of the Czerny-Lembert suture of the intestine, and apply ourselves to perfecting the method so ably advocated by Senn.

In the future I boldly assert that such an operation as enterostomy will not be known, excepting in cases which from neglect have been allowed to pass into such a collapsed condition that it would be impossible to do more than draw up a loop of intestine and drain; the artificial anus will give place to jejunio-ileostomy, ileo-ileostomy, or ileo-colostomy. For these operations to be successful, as I have already insisted upon, no time should be wasted in the administration of drugs, or in adopting Mr. Jonathan Hutchinson's plan of treatment—which by the way, is so novel that I think I cannot do better than to give it in his own words. He says in the *Records of Intestinal Obstruction with especial reference to Symptoms and Treatment* ("*Archives of Surgery*," vol. i.):—"The first point in abdominal taxis is the full use of an anæsthetic, so as to obliterate all muscular resistance. Next [the bowels and bladder being supposed to be empty] the surgeon will forcibly and repeatedly knead the abdomen, pressing its contents vigorously upward, downwards, and from side to side. The patient is now to be turned on his abdomen, and in this position to be held up by four strong men, and shaken backward and forward. This done, the trunk is to be held upwardmost, and shaking again practised directly upward and downward; whilst in this position copious enemata are to be given. The whole proceedings are to be carried out in a *bonâ fide* and energetic manner. It is not to be merely the name of taxis, but the reality, and patience and persistence are to be exercised. The inversion of the body and succussion in this

position are on no account to be omitted, for they are possibly the most important of all. I do not think that I ever spend less than half, or three-quarters of an hour in the procedure."

Mr. Hutchinson mentions no exceptions as far as the nature of the obstruction is concerned, so we may imply he advises this treatment in all cases. I must confess to my mind it is difficult to conceive in what manner these gymnastic exercises can effect reposition, and I cannot but think such energetic treatment might expose the patient to imminent risk of rupturing the intestine.

There is one method, however, in which in the case of volvulus, when seen quite early, that may be cautiously tried—I refer to rectal insufflation with hydrogen gas. Should the gut be rotated around its vertebro-mesenteric axis less than one complete circle, reduction might be effected by dilating and thus elongating the bowel below the seat of obstruction, but this insufflation must be done most carefully and gently, as, should the loop be considerably changed by the twist, rupture may result; so that I should not recommend this method of treatment unless operative measures were opposed by the patient and his relatives.

Preparation.—Before commencing any operation for obstruction of the intestines the patient should be somewhat prepared, especially in those cases in which there has been fæculent vomiting. In all such I advise as a preliminary measure that the stomach should be washed out just before operating with a 20 per cent. solution of salicylate of soda; by adopting this precaution the patient is put into a very much better position for after treatment. There will be no vomiting, and the absorption of the deleterious gases and secretion of such offensive matter as are in the stomach is avoided. The rectum should also be washed out with enemata. The patient should be fed entirely by the rectum, and have an enema of beef tea and brandy administered before being placed on the table, and be placed on hot water cushions during the operation.

I have here a few diagrams illustrating different forms in which obstruction is caused by bands or volvulus. Some of

these I have adapted from Treves' excellent work on "Intestinal Obstruction"; by referring to them I hope to be able more clearly to describe the steps of the different operations.

Choice of Anæsthetic.—In choosing an anæsthetic one must be guided to a very great extent by the condition of the patient; if very collapsed possibly ether would be the wiser, but in all ordinary cases I much prefer chloroform administered by Junker's apparatus. My reasons are that by this anæsthetic there is much less venous congestion, which is a very important matter; further, the breathing is quieter and more regular; there is not that jerking respiration which is so often present during the administration of ether, which is so liable to harass the operator. The patient should be *thoroughly* anæsthetised so as to have complete relaxation of the abdominal muscles.

An incision sufficiently large to allow three fingers to be inserted should be made in the middle line between the umbilicus and pubes; the exploring fingers should then be inserted, and the first region to examine, should be the cæcum. If this is found to be distended it will be a sure indication that the obstruction we are seeking is situated in the sigmoid flexure; if empty and collapsed then the obstruction must be looked for at the ileo-cæcal valve, or higher up in the small intestine.

If from this preliminary examination the probable situation of the volvulus or constriction is settled, no time should be lost, but the incision should be enlarged sufficiently to allow of the seat of twist or constriction being brought thoroughly into view. And here let me point out the value and importance of having an assistant or nurse told off entirely for supplying and changing soft cloths wrung out in warm carbolized water, for the purpose of covering the distended intestine which will inevitably escape from the abdomen; and here usually among the first coils that will escape, in the case of volvulus, on account of the greater degree of distension, will be the twisted portion of bowel.

In recent cases which are seen before adhesions have

taken place there is no difficulty in untwisting the coil and replacing the intestines into the cavity of the abdomen.

When adhesions have taken place and it is found difficult or impossible to untwist the volvulus, the loop should be at once opened and the contents allowed to escape.

It will usually be found that the distension is not due so much to fæcal contents, as to the secretion of gas, and let me caution you against merely puncturing the distended loop, as the intestine is from the excessive distension thoroughly paralysed, and an ordinary puncture which in a healthy intestine would quickly contract, in an intestine paralysed would remain patent and be the source of leakage. The loop, then, if it is found to be in such a condition that there would be danger in endeavouring to untwist it, should have a free incision an inch long made in it on its convex surface and in a longitudinal direction, care of course being taken that the patient is laid partially on his side and the opening held quite free from the opening into the peritoneal cavity, which should be protected with cloths, &c. It will be found that through this opening not only will the constricted loop be relieved but also a considerable portion of the intestine above it. This often will be easily emptied by gently holding loop by loop up slightly higher than the opening, when its contents will run out by gravitation. When the bowel is pretty well emptied it will be wise to wash it out with warm salicylized water. Senn goes so far as to say that he believes it is absolutely necessary to incise the bowel in every instance when the abdomen is opened for the purpose of reducing a volvulus. Without going so far as this there can be no doubt in the majority of cases when the volvulus occurs low down in the ileum or in the sigmoid flexure such a proceeding has much to recommend it; moreover, as will be shown later on, such an opening can be utilized for the introduction of the approximation disc. This evacuation of the bowel moreover facilitates the reposition of the intestines into the abdomen—a no easy matter often—favours the return of peristaltic action, and prevents fermentation after the operation.

It having been found that it is impossible to untwist the volvulus or reduce the constricted portion of bowel so as to restore its continuity, what is the next step to be undertaken? Here the same plan of treatment applies, whether



FIG. 1.

Strangulation of gut by diverticulum : showing position of plates connecting the constricted loop to adjacent portion of intestine.

the obstruction is the result either of a volvulus or caused by constricting bands or diverticula. As will be seen by referring to the diagrams, intestinal anastomosis by means of bone

plates (Fig. 1) should be established between the portion of bowel above the constriction and that below it ; by this means the continuity of the intestinal canal is restored. At the same time it will be as well to establish another anastomosis

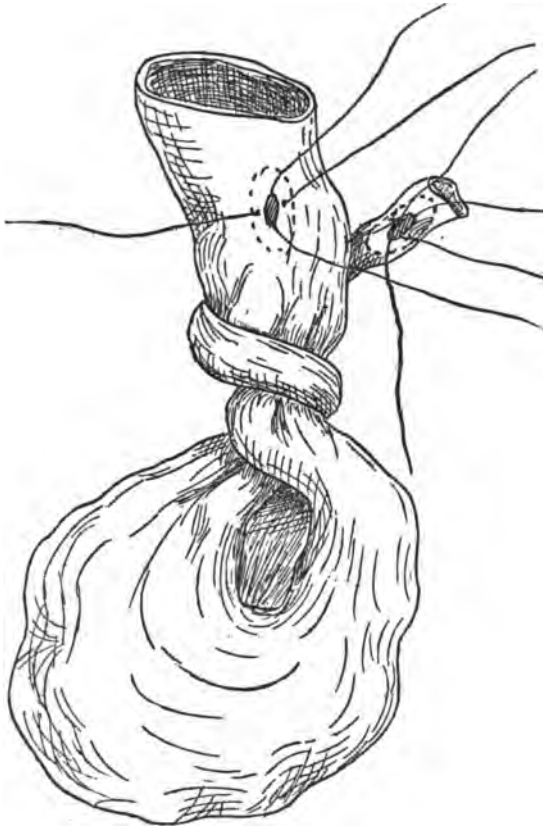


FIG. 2.

Volvulus : showing bone plates in position.

between the most prominent portion of the constricted loop and another coil of intestine, in its immediate vicinity, by this means a permanent fistula is established between the two, so that if any of the contents of the bowel pass by the

first anastomosis into the loop of intestine, it will pass away into another portion of the bowel lower down.

In the case of constriction caused by bands or diverticula the same rules hold good, that is if it is found that the constricted portions of intestine have become so adherent to the band as for it to be dangerous or impossible to separate them, then intestinal anastomosis above the seat of constriction must be established (Figs. 2 and 3).



FIG. 3.

Constriction of gut by band ; bone plates in position.

In some cases when the patient is not seen until extreme collapse has set in, a small incision should be made through the parietes and a loop of intestine fastened at the wound, and a drainage tube inserted and the contents drained off slowly—the patient being very slightly anæsthetised, and stimulating enemata administered.

In the case of gangrene of the constricted portion of the

intestine it may be necessary to perform enterectomy and remove the gangrenous portion; and here again the value of the approximation plates are demonstrated, as it has been hitherto a universal rule that in a case where a portion of the bowel has been removed an artificial anus has been established; it is true there are a few cases where surgeons have united the divided ends by a double row of Czerny-Lembert sutures, but the results were so disastrous that few surgeons would care to undertake it; moreover the length of time taken in performing this operation upon a patient already in a state of collapse precludes the possibility of performing it in most cases.

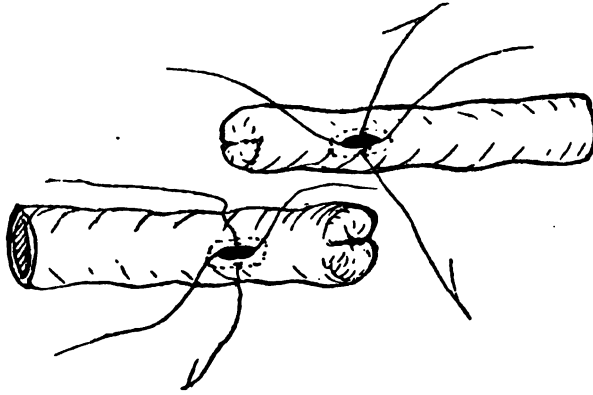


FIG. 4.

Ileo-ileostomy: showing bone plates in position and ends of intestine invaginated.

By adopting Senn's method, the gangrenous portion of the intestine being removed and all bleeding points secured, the intestine should be emptied of its contents as far as possible, and indeed it would be wise to wash it out with salicylate of soda and warm water; this being done the divided ends of the intestine are invaginated into themselves and secured by a few stitches of either chromicized catgut or fine Chinese silk—I usually use the former—and adopt the continuous suture as being more quickly applied. The two ends

of the intestine are then applied *end on* (Figs. 4 and 5). This is important to remember, as if they are applied otherwise there would be a distinct angle formed (Fig. 6). By applying the two portions *end on* the even passage of the contents is

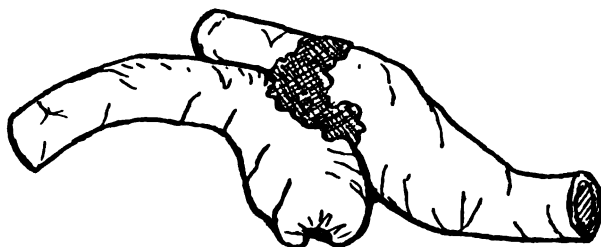


FIG. 5.
Ileo-ileostomy completed.

not interfered with. This operation can be readily accomplished in from thirty minutes to an hour, the act of inserting the plates and forming the anastomoses occupying but a few minutes.

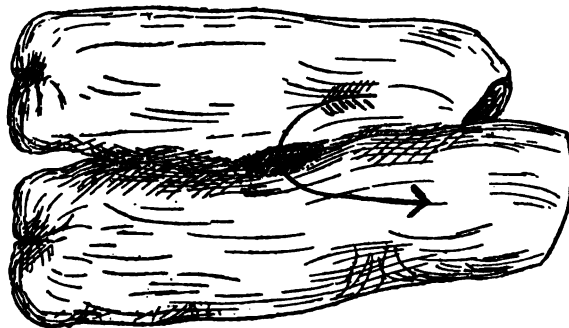


FIG. 6.
Ileo-ileostomy : improperly performed.

An opening is now made in the convex surface of the intestine about three-quarters of an inch in length and in a longitudinal direction. The bone plate which I now show you being armed with four long threads, the lateral ones being

of chromicized catgut and the end ones of Chinese silk, is now slipped through the opening into the intestine; the lateral catgut sutures are armed with fine straight needles; these after the plate is introduced into the bowel are passed through all the coats of the intestine from within outwards, and given to an assistant to hold. The end silk threads are brought out at the ends of the wound in the intestine and also given to an assistant, while the same manœuvre is carried out on the other portion of intestine, and the bone plate fixed in a similar manner. An assistant then holds the two portions of intestine with the bone plates accurately in apposition, while the threads are being tied, and here it is important to remember the order in which the threads must be tied. The lower lateral threads are to be secured first, then the end threads, and finally the upper lateral ligatures.

For precaution sake it may be advisable to introduce half-a-dozen Lembert sutures around the plates, but this is not necessary.

Senn recommends before the plates are fixed that the peritoneum should be scarified, he claims for this, that lymph is more quickly poured out, and firmer and quicker adhesion takes place. I have not hitherto adopted this course in the cases that have come under my notice, neither do I think it necessary.

There is one point that I should advise to be adopted, and that is, after the incision has been made in the intestine, the mucous membrane should be stitched to the peritoneal surface by a continuous catgut suture. This will prevent prolapse of the mucous membrane through the wound, and also prevent the possibility of the wound closing, as happened in a case of gastro-enterostomy performed by Mr. Stansfield, of Birkenhead. The case I refer to was one of gastro-enterostomy for pyloric carcinoma. The patient made a good recovery and all went well for two months, when the temperature suddenly rose and all the old pains and symptoms recurred, and the patient died four months after the operation. At the *post-mortem* the intestine and stomach were firmly adherent, but

on opening the stomach the only sign of the operation was the silk sutures, which were hanging where the wound had been. This was perfectly and firmly closed. It is then to prevent such a catastrophe as this that I in future shall always suture the mucous membrane to the serous before introducing the bone plates, and use chromicised catgut suture for passing through the bowel.

The reason for my advocating chromicized catgut for the ligatures that pass through the intestine is that in three cases that have died at different periods after gastro-enterostomy performed with silk sutures—one of my own and two of other surgeons, the bone plates have been absorbed and the silk sutures were dangling on the wound, thus forming a most dangerous nucleus for catching any substance that may be passing and thereby causing obstruction. Chromicized catgut was used by me in all my experiments, and notwithstanding the digestive powers of animals are far higher than man, they always lasted long enough to allow of firm adhesion taking place.

After evacuating the strangulated loop, should it be found to be unnecessary to connect it with another coil of intestine as above referred to, the opening should be closed by a double row of Lembert sutures.

In some cases where gangrene is limited to a small area it may be unnecessary to remove the whole loop of intestine; in such a case the serous membrane may be stretched over the gangrenous spot, which will then slough out and be discharged into the intestine, for it must be remembered that the circulation through the constricted portion of bowel will return so soon as the distension is relieved and the obstruction to the passage of the contents of the bowel is removed by the formation of intestinal anastomoses above and below the constriction.

In the early part of this paper I pointed out that the chief causes of the obstruction, we are considering, were the result on the one hand, of constricting bands or diverticula, and on the other, from volvulus the result possibly of an elongated mesentery.

It will be evident, then, when called upon to operate in any such cases it will be our duty, not only, to do our utmost to rescue our patient from his present perilous position, but likewise as far as possible to prevent the recurrence of them in the future.

To accomplish this it will be necessary in the case of obstruction caused by constricting bands, to remove these by simply passing a ligature around them at either end, and snipping them through with scissors—that is, of course, if they are not so firmly adherent to the loop of intestine as to prevent our doing so.

In the case of diverticula a little more caution is required, as these will in many cases be found to have an opening into the intestine, and if they were simply ligatured there may be a fear of future trouble from leakage. In this instance therefore the diverticula should be cut across and removed, then the peritoneum over the divided stump should be stitched over by a Lembert suture, and if there is a sufficiently large opening the end should be invaginated and fixed in position by a Lembert suture.

In the case of volvulus, should the mesentery be found to be abnormally long after the reduction of the volvulus it should be shortened, and this is easily accomplished by folding it over on itself parallel with the bowel, as suggested by Senn, and fixing the apex to the root of the mesentery by a few sutures. By this simple manœuvre all future fear of trouble from this cause may be avoided.

CONCLUSIONS.

The conclusions, then, that I have arrived at from my experience are as follows:—

1. Obstruction of the intestines, the result of constricting bands or volvulus, are always met with either in the small intestine or the sigmoid flexure.
2. The most common cause of bands are old peritonitis,

local or general. Meckel's or other diverticula may be the cause of constrictions of the bowel by snaring or twisting.

3. The predisposing causes of volvulus consist in elongation of certain segments of the intestine, abnormal length of the mesentery, adhesions, or unequal peristaltic action.

4. The higher in the intestine the obstruction the more severe usually are the symptoms.

5. All cases of obstruction should be treated by early abdominal section, and if possible reduction of the constricted portion of the intestine by dividing constricting bands or untwisting a volvulus; that is, if the gentle insufflation of hydrogen gas per rectum fails to effect reduction.

6. In all cases where the intestine is very distended it should be freely incised and its contents evacuated.

7. In all cases in which the constriction is irreducible, lateral anastomoses by approximation discs should be practised so as to exclude permanently the seat of obstruction from active fæcal circulation.

8. In cases where gangrene has taken place in the loop of constricted intestine, it should be excised, and the portion of intestine above and below the seat of constriction should be united by lateral anastomoses by approximation plates, the divided ends being invaginated into themselves.

9. All bands and diverticula should be removed when practicable at the time of the operation; in the case of volvulus, if the mesentery is abnormally long it should be shortened.

10. That enterostomy, or the formation of an artificial anus, should never be performed unless it is found to be absolutely impracticable to re-establish the continuity of the intestinal canal by enterorrhaphy, or by means of lateral apposition as described, on account of the collapsed condition of the patient or other cause.

Gentlemen, I have already, I am afraid, far exceeded the time usually allowed for reading papers, and still there is much I should like to have said. Allow me to express my regret that through unavoidable circumstances I am prevented

being with you this evening, and I especially wish to thank my friend, Dr. R. T. Smith, for so kindly reading my paper for me. For the diagrams accompanying this paper I am indebted to Mr. C. Heaton, House Surgeon to the Cancer Hospital.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 8, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 51 Fellows, 23 Visitors.

The following were proposed as Fellows of the Society:—
Friend Richard Eccles, M.D., F.R.C.S.E., London, Canada;
James C. Wood M.D., Arbor, Michigan; A. Portelli Carbone, M.D., Malta; John Stonely Hill, M.B., C.M., London;
William Edward Cree, M.R.C.S., London; William John Chichele Nourse, L.R.C.P., London; F. Peck, F.R.C.S., Magrefferpore, India.

On the Correlations of the Sexual Functions and Mental Disorders of Women. By ROBERT BARNES, M.D., F.R.C.P.,
Consulting Physician to St. George's Hospital, &c.

The correlations of the sexual functions and nervous phenomena in the female are too common and too striking not to have attracted attention at all times; but it may be confidently affirmed that it is only within quite recent years that we have had adequate knowledge to enable us to discuss the problems arising out of these relations, with scientific precision. Gynæcology and our knowledge of the anatomy and physiology of the nervous system have advanced, if not *pari passu*, at any rate concurrently, so that now we have the clearer and reciprocal light shed by better knowledge of the two main factors to aid in our researches.

It may be stated *in limine* that the association of nervous disorders with disease or disordered functions of the sexual organs is extremely frequent; and that if this association is not more frequently recognised by gynæcological and psychological



specialists, it is because the perceptive faculties of the specialist are too often blind to objects outside the immediate range of his research.

When a case of nervous disorder complicated with disorder of the sexual system comes before us, three questions arise: 1. Did the sexual disorder declare itself first? 2. Did the nervous disorder declare itself first? 3. What are the mutual reactions of these two disorders? And if we trace antecedence of the sexual disorder, can the nervous disorder be traced to the sexual as a cause or *vice versa*?

Then another question, one that has to be considered in every case of insanity, arises: Is there a predisposing cause, as heredity? It is a gross error to assume that heredity is a necessary factor; and even admitting that it is, the true clinical physician will not the less reflect that this or other predisposing cause might have remained latent or unknown until worked upon by the immediate or evoking cause. Or, excluding heredity, are we driven to the alternative provisional conclusion that the complication is simply an accidental association? It must be granted that no satisfactory solution can be attained without bringing to the inquiry thorough all-round diagnostic skill. Even if not directly causative, serious sexual disorder cannot fail to be an aggravating factor of the nervous disorder.

This argument ought not to need enforcing at the present day. Before the recent advances of gynæcology, women, sane and insane, had to suffer from ills now known to be curable. In studying the correlations of mental and sexual phenomena we are at once struck by the double light thrown upon the problem by the application of surgery. The immediate design of surgery is the relief of suffering. In this it may or may not be successful. But one good result is sure to be attained, that is, an increase in knowledge. It is not my intention to dwell upon what surgery has achieved in tracking home and laying bare to the eye the precise seat and nature of many diseases of the brain and spinal cord, heretofore dimly diagnosed through the fallacious interpretation of

symptoms. The work of Ferrier, Horsley, McEwen, and others has opened new and fertile ground. We find not less remarkable results achieved in the field of gynæcology. Gynæcology is largely surgical, and the true solution of its most important problems is revealed by direct appeal to surgery. Not to extend this argument we may simply state that the surgery of the brain and spinal cord, and of the abdominal and pelvic cavities, is at once experimental and therapeutical. It is vivisection of the noblest kind. It teaches physiology, the rational basis of the healing art; it demonstrates pathology at the same time that it heals. The surgeon learns, the subject gains life and health. And here it is surely right to ask: Has this enlightening and beneficent surgery been fairly applied to the study of the physiology and pathology of woman, or to the relief of women secluded in lunatic asylums?

Influence of Normal Menstruation in Healthy Subjects.—

Observation of this influence is a necessary introduction to the study of the influence of disorders of function. It need not detain us long. There lie at the root of this inquiry important physiological facts. When puberty sets in there is a rapid, almost sudden, evolution of new tissue, especially marked in the pelvic organs and in the breasts. Concurrently, or consequentially, there is marked extension of local, and perhaps of general, areas of the vascular and nervous systems. Bearing upon this is the anatomical difference of the two ends of the spinal cord; the pelvic region has a superior development in females, the thoracic in males. This evolution evokes corresponding activity or energy of these systems. The heart acquires more power, and if we might, as I believe we may, apply the deductive argument from the analogy between gestation and menstruation we should infer that the heart gains in substance. We have direct evidence of the increase of vascular lesion during menstruation from the sphygmograph. This has been specially studied by Dr. Fancourt Barnes partly under my observation. The increase of nervous tension is familiar to everyone. Coincident with

this physical evolution there is a characteristic mental evolution that marks the transition from girlhood to womanhood. This transition is often the first trial of mental and bodily soundness. Under this great physiological test not a few break down. But unless there be an hereditary fault the test is borne. Then come the recurrent menstrual trials. The mutual reaction culminates in health. The system adapts itself to the natural impulse, and due equilibrium is established. The appearance of the first menstruation after labour has often been the signal of an attack of insanity. This was pointed out to me by Baillarger at the Salpêtrière. I have verified the relation by subsequent observation.

The epoch of severest trial is the climacteric or menopause. Arrived at this epoch, the subject has been tried in many ways, she may be less able to resist the more or less abrupt cessation of a periodical motor and governing function. Few women probably go through the reproductive era without some nervous trouble. They labour under painful dangerous tension, often concealing their distress, but sometimes on the verge of breaking down.

In this association may be noted the influence of betrothal and marriage. Not a few cases are known of insanity breaking out in young women soon after marriage. Moral and personal feelings may be concerned, but very often probably the overthrow may be accounted for by the sudden disturbance of the ordinary work of the ovario-uterine system. Severe hæmorrhage attesting some degree of violence is a complicating cause. Savage calls attention to mental disorders developed on betrothal. Tilt¹ emphasises the danger attending marriage at the climacteric, and relates the history of an intelligent woman who married at fifty. On the wedding night she had sudden uterine pains followed by flooding. She became bent on suicide, and melancholic. When menstruation ceased she got well.

When considering the trials of ordinary menstruation,

¹ "Change of Life."

we must not forget that this is a phase of the reproductive function, a preparation for pregnancy. Although multitudes of women go through this period of life unscathed, without ever having conceived, or even without sexual relations, it is certain that to be cut off from this part of woman's life often entails the severest strain. Under the stress of a function unfulfilled, not a few break down, morally or mentally. The physical and mental disappointments react injuriously upon each other.

So, when an interfering or complicating factor intervenes, as neurotic diathesis or disordered action of the sexual organs, the equilibrium is lost, and nervous disease may be provoked. So strong is the passion to fulfil the functions of womanhood, that in spite of the most authoritative warnings of the doctor, some women so deformed that childbearing can only be encountered at the imminent risk of life, wilfully and recklessly run the risk.

We may first point out the influences of disordered functions of the sexual organs not depending upon serious organic change. One of the most obvious of these is what is best described as dysmenorrhœa from obstruction that is caused by mechanical impediment to the natural flow of the menses. Stenosis or contraction of the os externum uteri is the most obvious impediment. With or without this, may exist acute flexion of the neck of the uterus. When this condition exists the normal hyperæmia of menstruation culminates in intense congestion. Hyperæmia often entails hyperplasia. Acute pains due to tension of the swollen tissues and spasmodic contraction follow; and the sympathetic and reflected action upon the ganglionic, spinal and cerebral centres is often greater than can be borne.

With or without dysmenorrhœa, another trying condition is menorrhagia. The loss of blood entails alteration in the quality of the blood. The nervous centres are ill-nourished, and therefore prone to morbid action.

It is important to form a definite and rational idea of the terms—hysteria and neurosis. Too often they are mere words

used to conceal ignorance. This is an *asylum ignorantiae* which ought to be closed. Hysteria is not an independent entity. It is a symptom. If we cannot trace the symptom and its cause, commonly underlying disorder of the sexual system, the rational course is to infer that our skill is deficient, and not to bow down before an idol of the imagination. This is certain, that in many cases hysteria is the forerunner of insanity. This also is certain as the result of large clinical experience, that hysteria is cured by removing the causes of dysmenorrhœa. My case-books teem with cases of syncope, loss of memory, epilepsy, perversion of senses, hallucinations, associated with dysmenorrhœa, many of which were relieved or cured by removing the cause of the dysmenorrhœa.¹ The study of the influence of diseased ovaries opens another field of inquiry. Négrier affirmed that the influence of the ovaries and the activity of their function is in direct proportion to their volume. This is difficult to prove. But when we pass to diseased ovaries we are on more certain ground. Marked increase of size is presumptive evidence of disease. Négrier relates a remarkable case of mutilation and suicide at the last day of menstruation in which the ovaries were much above the normal size.

There may be an acquired neurotic diathesis, the relic of disease in childhood, as chorea. In my Lumleian Lectures I specially illustrated this point, adducing cases of malarious infection, from which the subjects had apparently recovered. When menstruation or pregnancy supervened the latent disease was evoked, and ague fits recurred. I have noted similar examples in which epilepsy and chorea, apparently cured, returned under the stress of menstruation or pregnancy.

The connection between amenorrhœa, chloro-anæmia and nervous disorders are deserving of careful study. Trousseau said that chlorosis was essentially a nervous disease. A lady seen by me recently has never menstruated since the func-

¹ This subject is discussed with some fulness in my Lumleian Lectures on the Convulsive Diseases of Women before the Royal College of Physicians, 1874.

tion was arrested by the earthquake on the Riviera. Certainly in some cases nervous disturbances have preceded the chlorosis. More frequently anæmia with amenorrhœa is the antecedent condition. The arrested function is commonly associated with disorder or perversion of the intestines or hæmogenetic functions. And this cannot last long without entailing weakness or perversion of the nervous functions. The word anæmia conveys a very imperfect idea of the state of the blood. Toxæmia with spanæmia would express the state more nearly. The blood becomes not only deficient in red globules, but it becomes contaminated by the absorption and retention of matters that ought to be excreted. One form of contamination is obvious: this is the absorption of fæcal matter, the result of long retention in the lower bowel. To this kind of empoisonment I have given the name "*Copræmia*." Other poisons, whether directly absorbed, or the result of interactions in the circulation, in all probability arise, although they escape clinical and chemical analysis.

The complication of insanity with obstinate constipation is frequent. It demands vigilant and effective treatment. I exhibited to the British Gynæcological Society the pelvis of a young woman who died in an asylum. I was in search of a subject to demonstrate the normal relations and dynamics of the uterus; but I found the pelvis occupied by the cæcum enormously enlarged. This organ was loaded with hard fæces, the accumulation probably of months. Thus there was not only *copræmia*, but direct pressure upon the pelvic structures and nerves. Due attention to the bowels might have obviated all this. Bearing upon this is a note from Dr. Alexander Newington:—"I have a series of five cases of acute mania in women almost immediately relieved, in fact cured, by clearing out the bowel by means of oil and the long tube. In these collections in the transverse colon the bowels acted with medicine, but were never properly cleared."

We are all familiar with the strange aberrations of appetite, the senseless eccentricities of manner and other morbid phenomena, which often attend this condition. I refer to the

subject here in order to emphasise the truth that similar conditions often complicate the mental disorders of patients confined in lunatic asylums, and to point out the duty of treating them, whatever our opinion may be as to their primary or secondary relations to the insanity.

If we pass to the neuroses that attend morbid conditions of the uterus and ovaries we get even more striking evidence of causation. A frequent state is displacement of these organs, not necessarily diseased in tissue. The most common is retroflexion or retroversion, with or without prolapsus of the uterus. These can hardly exist without entailing some disorder of menstruation, and this is enough to disturb the nervous equilibrium. But in addition to this, the displaced organ presses upon other organs, as the bowel and bladder, impeding their functions, and especially it presses upon the sacral plexus, and so causes constant irritation of the lower segment of the spinal cord, a part of the nervous system as we have seen, more highly organised than it is in the male. So-called sympathetic, reflex, or diastaltic phenomena are frequent. In not a few instances these minor nervous disorders culminate in melancholia and mania. I have the histories of cases in which the subjects had been insane for long periods, with no sign of amendment until they came under my care. I discovered pronounced retroflexion with hyperplasia of the uterus. This being corrected by surgical treatment rapid recovery ensued. In one most striking case the subject returned to her home, bore twins, and has since been in perfect physical and mental health. Dr. Benington brought before the British Gynæcological Society¹ a case equally remarkable. Dr. C. E. Louis Mayer² in a memoir on the relations of the morbid conditions to the sexual organs and psychoses, relates some instructive cases. Schröder van der Kolk relates the case of a profoundly melancholic woman who suffered from prolapsus uteri, in whom the melancholia

¹ *British Gynæcological Journal*, February, 1890.

² *Verhandlungen der Gesellschaft für Geburtsh.*, 1869.

used to disappear directly the uterus was restored. Fleming mentions two similar cases in which the melancholia was cured by the use of a pessary, in one of them returning whenever the pessary was removed. "In one instance," says Maudsley, "I saw severe melancholia of two years' duration disappear after the cure of prolapsus uteri." This case was, I think, treated by me. Dr. Arbuckle, of the West Riding Asylum, communicated to me (1882) a most interesting case of inversion of the uterus which he reduced after my method, after many attempts by other plans had failed. The inversion had lasted a year. She was very anæmic, emaciated, with mind enfeebled. She got perfectly well after the restoration of the uterus. It is probable that inversion of the uterus entails pressure upon the ovaries and disturbance of their function. Griesinger says he has observed very successful cases of recovery from hysterical insanity by means of local treatment of the genital organs after all other means had failed.

Similar examples of nervous disorder have been observed in connection with displacement of the ovaries. Occasionally one ovary sinks down in Douglas' pouch, getting below the level of the uterus. Severe nervous symptoms follow, and have been relieved by maintaining the ovary in its proper place, or by removing it. Trouble is especially liable to occur when the ovary is enlarged to the size of an orange or even less. In such a case removal by operation is clearly indicated.

The influence of disease of the ovaries is not less remarkable. Physiology points to the ovary as the ruling organ in woman, "*Propter ovaria mulier est quod est.*" Accordingly we might expect that the disease of this organ would cause most disturbance of the nervous system. Evidence bearing upon this conjecture has been growing of late years; but it has long been foreshadowed. Thus Icard¹ relates that Pro-

¹ *La femme pendant la période menstruelle, Etude de psychologie morbide et de médecine légale*, 1890.

fessor Coste had brought together in the Musée de France a fine collection of uteruses and ovaries taken from women of all ages who had committed suicide during menstruation. I wrote to Dr. Auvard asking him to examine this collection. He kindly did so. His report is that the specimens are all scattered and destroyed. Thus has a brilliant prescient idea aborted. But the example remains for imitation.

The following history is doubly instructive: Boyer relates the case of a lady who, during her first pregnancy, became insane. Ten years later the mental alienation having returned it was concluded that she was pregnant. Boyer removed a polypus from the uterus, and she quickly recovered. This is an illustration amongst many of the analogies between ordinary gestation and the carrying an intra-uterine tumour.

I have adverted to the light that exploratory and therapeutical surgery throws upon the healthy and morbid action of the ovaries and uterus. The subjective and objective signs revealed by the ordinary methods of clinical observation teach us much. But how infinitely more precise our knowledge becomes when the opportunity is afforded of studying the condition of the economy when these organs are taken away. Of course we know that removing the organs of reproduction entails sterility; but this is not all. What is the effect upon the organism as a whole, or upon the nervous system in particular? One factor in the question is the immediate influence of the operation itself. Severe injuries, starvation, shock of great catastrophes, sun-stroke, have been followed by insanity. Surgical operations, other than those with which we are now concerned, are occasionally followed by insanity. The shock of labour may be enough to overturn the nervous equilibrium. Temporary delirium, hallucinations, violence to self or child, in some cases passing into mania, are evidence of this. No doubt there are other factors; simple shock can hardly be.

Knowing this, we have to inquire whether abdominal surgery, involving the removal of the ovaries and uterus, is

especially causative of insanity. If it be shown that insanity follows these operations in a sensibly larger proportion than it does in consequence of other operations, then a reasonable presumption arises that it is the deprivation of the uterus and ovaries, and not the mere surgical operation which leads to the insanity. The facts actually acquired strongly support this proposition. A point to bear in mind is, that the effect of shock is likely to be immediate, whilst privation of the uterus and ovaries may not be felt until after a marked lapse of time.

This proposition established, do we not see in it proof that these organs exercise a motor and governing power over the nervous centres? We have long been familiar with the effect of castration upon the male economy. The eunuch retains the voice of the boy, the essentially virile attributes are not developed. Does history record an undoubted example of a great discovery or a great invention made by a eunuch? It would be interesting to learn the relative prevalence of insanity amongst entire and castrated Orientals. The application of this to our argument is obvious. To unsex a woman is surely to maim or affect injuriously the integrity of her nervous system. Observations of the effect of castration and spaying animals might throw some light upon this question. Appeal may be made to the experience of veterinary surgery to help.

M. Barthelmy (*Journal de Médecine Vétérinaire*) says that œstrum or rut can occur in pigs after complete removal of the ovaries.

I have no opportunity to make anything approaching to an exhaustive summary of cases, but the following facts are instructive :—Sir Spencer Wells writes (June, 1890) to me : “Twice during convalescence after ovariectomy I have seen acute maniacal attacks, but both patients were of lunatic families. . . . In some cases where double oöphorectomy has been performed without, as I think, sufficient reason, I have seen patients almost melancholic at their mutilated condition and sterility.” Dr. Savage, of Birmingham, informs

me (July, 1890) that he has removed the appendages on both sides in 483 cases; of these 26 died after the operation, 4 aged respectively twenty-five, twenty-five, and thirty, became insane and recovered; one, aged thirty-eight, committed suicide about six months after the operation. Dr. Thomas Keith writes (May, 1890): "So far as my limited experience goes I would say that the removal of the ovaries for disease has not been in any case followed by any disturbance in the mental conditions, nor have I seen any change after the removal of the ovaries for checking the growth of bleeding fibroids; but after hysterectomy and removal of both ovaries the effect has been decided, and I cannot consider the results accidental. Of sixty-four hysterectomies (supra-vaginal or complete removal of entire uterus) there have been six cases of insanity—three acute and three chronic cases. In one of the acute cases, the patient, a hospital nurse, had been in Morningside Asylum with an attack of acute mania. Two of the acute cases died after operation, the other four are alive but none of them well."

Lawson Tait, referring to Keith's statement cited above says: "I have operated upon a very much larger number of cases of hysterectomy, and I know of no case of insanity in my practice. Instances of insanity occur after all surgical proceedings, even the most trivial, and even after the administration of an anæsthetic." On the other hand Tait states that there are "three cases of insanity of the most pronounced type completely cured by the relief of the sufferings involved by the hæmorrhagic myoma. . . . Besides, this, there are a number of cases of striking eccentricities and ill-temper, clearly due to the sufferings which have been equally relieved."

One lesson to be deduced from this apparent conflict of experience is that the question demands earnest and extended inquiry. One difficulty in the way is that the subsequent history of the subjects of operation can hardly be complete.

I will offer this one reflection. It seems more rational to look for freedom from mental disease in those women who

have undergone a successful operation for the cure of an ovarian or uterine disease. Such diseases we know are apt to entail nervous disorders, and we have seen that the nervous disorders, when complicating disease of the sexual organs, are frequently cured when the diseased organs are removed. But another inquiry should also be instituted as to the influence of removal of the healthy organs on the nervous system.

As to the question : Are we justified in operating upon a lunatic who cannot give a responsible assent? In a case which came under me the indication to remove the ovaries was to my judgment decisive. I was supported by the assent of her guardian, of an eminent hospital physician, and of a distinguished alienist; but I declined to undertake the responsibility without the sanction of the Commissioners in Lunacy. The patient continued insane. Sir Spencer Wells, in a case somewhat different, being consulted as to the legality of ovariectomy upon a lunatic, asked Sir William Harcourt, then Home Secretary, who said, "If she is incapable of judging for herself, treat her as if she were an infant." So the operation was done, the patient recovered and married. Surely this dictum is good sense as well as good law!

Does epilepsy, often so intimately associated with menstruation, justify removal of the ovaries? Lawson Tait ("Diseases of the Ovaries," p. 328) has removed the ovaries—Battey's operation—in five cases under this indication. All recovered from the operation; but the results as regards cure were not so satisfactory as to encourage him to pursue the practice. I believe that the cases are quite exceptional in which this operation can be admitted.

There is one form of insanity which is of extreme importance in its medico-legal aspects. Dr. Skae refers to cases of cancerous disease of the uterus and rectum accompanied by the delusion of violation. But this form of sexual hallucination is not always associated with recognisable disease of the sexual organs, nor even with other indications of mental disorder. It is this feature which makes the

subjects of sexual hallucination the more dangerous. I have been consulted in several cases of false charges of rape or seduction of this kind. It is often difficult to differentiate depravity from disease.

Insanity of Pregnancy and Puerpery.—This subject has been so ably discussed by Dr. Savage that I am relieved of the task of describing it. I propose only to offer a few observations, the result of special experience and study.

I have often insisted upon the analogy between menstruation and parturition. Menstruation may be regarded as a mimic pregnancy. The physiological analogy finds its counterpart in pathological analogies. Thus the observation of the nervous affection in the one state illustrates the nervous affection of the other. The nervous affections which occur in pregnancy must not be confounded with those which occur in pregnancy and during lactation. The type differs in some respects. I have adverted to some of the anatomical and physiological conditions evoked by menstruation. The organic changes and consequent physiological phenomena evoked by pregnancy are similar, but far more striking.

The law formulated by me¹ has an instructive bearing upon this question: "Since in pregnancy every organ and the whole organism are specially weighted, undergoing extraordinary developmental and functional activity, so any defect or fault, inherited or acquired, howsoever latent, will be liable to be evolved or intensified under the trial. Hence pregnancy is the great test of bodily soundness."

The nervous system probably first feels the influence of pregnancy. The alterations observed are: 1. Increased psychical mobility; 2. Increased emotional mobility; 3. Increased diastaltic or reflex mobility; 4. Increased ganglionic activity.

The blood and the vascular system quickly give evidence of change. The blood mass is increased. Its constitution is altered. Not to dwell upon these changes, it is important to

¹ "System of Obstetrics."

note the structural changes in the heart. The enormous work thrown upon it compels increase of tissue, that is, of bulk. The heart beats more quickly, as well as more forcibly; that is, the arterial tension is greater. The effect of irritable heart in perverting the functions of the brain is often very marked.

One effect of this high tension is seen in exophthalmic goitre. As a result of high vascular tension, albuminuria is apt to occur, and this state implies grave alteration in the constitution of the blood involving troubled functional action of the kidneys and liver, which reacting upon the poisoned nervous centres leads to nervous disorder.

Phenomena showing that the physiological boundaries have been broken down illustrate the conditions that may lead to insanity. Amongst these are apoplexy and paralysis. I have seen several examples. I prefer to quote from a letter by Dr. Wilks relating to one of these seen by us independently. In another case a woman, aged twenty-two, when three months pregnant with her first child, was seized with severe neuralgia of the head, she became drowsy, and fell into a lethargic state, apoplexy marked by stertor set in, left hemiplegia, lateral divergence of head and eyes; slight convulsions and death ensued. A clot of blood was found in the substance of the brain, and an ante-mortem clot in the lateral sinus. This, Dr. Wilks says: "Suggested thrombosis of vessels as a cause of hæmorrhage. Thrombosis of sinuses is a curious affection occurring mostly in anæmic women. In my published lectures I give cases, and I can now quote one or two more."

It seems probable that minor degrees of thrombosis may constitute a stage or factor in the production of insanity.

It may be broadly stated that the nervous disorders of pregnancy are the result of high nervous and vascular tension; and that the nervous disorders of puerpery and lactation are the result of shock, lowered nervous and vascular lesion, and spanæmia with toxæmia.

In studying the history of insanity in pregnancy, we cannot fail to be struck with the common features of resem-



blance or of relationship between the different forms of convulsive disease which arise during that condition. In this comparison we ought to include the relationship of syncope, vertigo, migraine, apoplexy, paralysis, delirium, insanity. They often form links in one chain. Syncope and vertigo should be studied in their relations to uræmic (albuminuric) eclampsia; apoplexy in its occasional relations to uræmic eclampsia; paralysis in its relations to apoplexy and epilepsy; and insanity in its relations to epilepsy, eclampsia, and chorea. All the convulsive diseases may culminate in mania or dementia.

What is it then that determines epilepsy in one case, vomiting in a second, chorea in a third, tetanus in a fourth, eclampsia in a fifth? We must invoke a peculiar antecedent condition of the nervous centres probably unknown or unsuspected until it declares itself under the magical ordeal of pregnancy. This is illustrated by the history of chorea, which I have shown (Lumleian Lectures) rarely if ever occurs *ab initio* in gestation, the subjects having had it in childhood; in epilepsy, in the subjects of which there can generally be traced hereditary proclivity or previous attacks. But the postulate of an antecedent condition is indisputably settled by the case of ague. We cannot conceive the possibility of ague being evolved out of the proper conditions of pregnancy; and we know that other conditions, as a surgical operation, will act in reproducing ague.

These and analogous histories point to the conclusion that the neurotic diathesis is dependent upon enduring structural alteration of the central nerve-tissues. This condition will, I believe, be found to be far more general than is commonly recognised.

Another striking illustrative argument will be found in the history of syphilis. Long after supposed cure, disease which was only latent recurs under recognised phenomena of syphilis or leads to paraplegia, general paralysis, dementia or other forms of insanity.

Dr. Thorburn relates a most interesting case of "im-

mediate cure of suicidal mania by the induction of premature labour."¹

Amongst the nervous phenomena that occur in pregnancy, it is useful to note loss or impairment of the perceptive senses—deafness, amaurosis, loss or perversion of senses of smelling, touch, and taste are not uncommon. These affections may be factors in the production of hallucinations or delusions or other forms of insanity.

SUMMARY—CONCLUSIONS—CLINICAL DEDUCTIONS.

I may conclude this imperfect presentment of a great theme by stating what seems to be the logical sequence of the facts and arguments set forth.

One proposition I present is indeed self-evident. All the resources of medicine, special and general, should in every case be brought to relieve the sick. This implies that similar direct objective investigation to that which is pursued in the case of females suffering from sexual disorder not apparently complicated with nervous disorder, shall be made in the subjects of nervous disorder in whom there is reason to infer that sexual derangement exists.

In the first place there is the immediate indication to seek for light as to the cause of the nervous disorder, with a view to relieve this complication. In the second place, even if the nervous disorder be found not to depend upon the sexual disorder, it is still the duty of the physician to do what he can to relieve the sufferer from this element of trouble. An insane woman has surely as much right to relief from disease of the ovaries and uterus as a sane woman has.

Griesinger (1867) speaks very decidedly upon this point. He says:—"On the least suspicion, a local examination should be made. It is certainly of great detriment to the patients that there exists amongst the asylum physicians a truly childish delicacy in regard to vaginal examinations. In

¹ *Lancet*, 1879.

Germany, France, and England I have found the same delicacy; they seem to be afraid of exciting the patients." This was said in 1867. I think the censure may now be considerably modified.

One rule I strongly urge. In every case of puerperal insanity, examine into the condition of the pelvic organs. Imperfect involution of the uterus is in the highest degree probable. In addition to other factors the function of the breasts is almost always suspended. Thus a most potent stimulant to involution is wanting. Then retroversion or retroflexion is very probable. Relief from these conditions cannot fail to be beneficial, and may even bring about recovery.

Thus we see that in this inquiry the Psychologist and the Gynæcologist meet on common ground, each enlightening the other; and both helping to build up out of the materials of their special knowledge that true science, that comprehensive medicine, which holds out the best prospect for the relief of physical and mental suffering.

Dr. SAVAGE alluded to the relatively small amount of success that had followed examination of the pelvic organs of insane patients. It had been very exceptional that any good could be done to the patient by these means. He too remembered a case in which a condition of profound melancholy was associated with prolapse of the uterus, and the patient had been restored to health within twenty-four hours of the relief of this condition. He pointed out that there existed a peculiar disposition to mental disturbance coincident with the establishment of menstruation mentioned by Dr. Barnes. So in a certain class of persons there seemed to be provision of nervous force sufficient for ordinary purposes of growth and nutrition, but when the reproductive organs came into play the strain was greater than they could bear. Referring to masturbation, he raised the question as to whether this was a symptom or a cause of the disease. One met with young persons in whom masturbation developed on the establishment of menstruation as an untaught vice, and in a certain proportion of the cases insanity occurs through

or with excessive masturbation. It was in this class of cases that the question arose as to whether it was justifiable to remove the ovaries. He suggested that the matter was one well worthy of consideration at the hands of the Society. So far as operative measures went, he said he had little personal experience. There certainly were cases in which the existence of insanity might possibly be referred to some disorder of the uterus or ovaries, and he insisted upon the diagnostic value of hallucinations of the sense of smell as an indication of the existence of troubles of the reproductive organs. He had remarked the liability to hallucinations of the smell in confirmed masturbators of both sexes. In one case at Bethlem Hospital in which there was ovarian disease this symptom was present to a marked degree. The ovaries were removed, but though the patient ceased to be subject to the hallucinations she remained insane. He observed that the insanity of pregnancy was but an exaggeration of the disturbance occurring during ordinary pregnancy, such, for instance, as perversions of taste, smell, vomiting, &c. He had always maintained that it was not justifiable to induce abortion in cases of insanity during pregnancy. He had seen cases in which miscarriage had taken place without any immediate relief to the mental condition. Passing on to discuss the question of sexual perversion, he observed that this was a marked symptom in a certain number of the cases, and he mentioned one such case in a woman who proved to have an infantile uterus about the size of a nut, although the vagina was of normal capacity. This patient had always manifested a strong passion for other women. He remarked that the degenerated man tended in physical characteristics to approach the woman, and *vice versa*. Hence a woman with unnatural growth of hair on the face and other masculine features was particularly liable to a breakdown of this kind. He raised the question whether or not this association of degenerative changes bearing on the reproductive organs was commonly associated with a tendency to undue growth of hair on the face.

Dr. WILKS said that as he did not belong to this particular department he had to take a larger view of the question as to the connexion between nervous disturbances and local affections. In fact, he might be considered to pass his life in endeavouring to unravel what was a general condition and what a local one; in other words, What were the subjective and what the objective phenomena? If he had a pain in his finger he might think it was something wrong locally, but he might be told that the symptom was due to some affection of the nerve centre. They had heard one side of the question from Dr. Barnes, and he trusted that in his reply he would give them the other aspect. There was truth on both sides. Dr. Savage had shown them how various local disorders might give rise to insanity. He himself remembered a case in which incoercible vomiting rendered a patient insane, but on her death they found that there was cancer of the stomach. In another case, under the care of Dr. Savage's predecessor, the woman was always complaining of a certain tumour on the abdomen, and she recovered when this was removed. He was, therefore, quite prepared to allow that local causes might give rise to nervous symptoms. If that held good of all the organs it was peculiarly so of the reproductive organs. Personally he saw more of such affections in the male, cases of spermatorrhœa or spermatophobia as some preferred to call it. Was that a local affection, or was it the result of a mental condition? He alluded to a well-known lecture by Paget, in which the subjects of it were considered to be mad. He mentioned the case of a patient who had been to most of the best known men in London to be treated for some discharge from the urethra, who were taking directly opposite views of his case. Although there was a good deal of truth in what Dr. Barnes had said, he could tell of many cases which proved the opposite truth—that local diseases might be due to general causes. He mentioned the case of a married woman who was very anxious to have children. None came, and she ultimately became despondent, and was treated for several varieties of uterine disease. He had a consultation on

her case with a distinguished gynæcologist, and he had ventured to hint that it would, perhaps, be a good thing to divert her mind from her reproductive organs. The gynæcologist, however, was sanguine that he could do her good and set to work, but a year later her condition was the same, and he then persuaded the husband to consent to her adopting a child, seeing that the maternal instinct was so strongly developed. This was done and was attended by complete success. He asked, therefore, how far the mind being directed in a particular channel might be productive of local symptoms. He referred to a discussion which had taken place between himself and Mr. Hovell, in which he had been credited with the statement that all hysterical affections were due to uterine disease, but that was not a correct interpretation of his views, for he maintained then, as now, that each case required to be taken on its merits. He mentioned the case of a personal friend of his who had developed this pre-occupation about his genitals, and who subsequently becoming a confirmed lunatic the symptoms disappeared. Also one of a lady, who after having been long treated for pain in the region of the bladder, became the prey of a profound melancholia when the urinary symptoms disappeared. In considering the correlations of sexual and mental disorders, he thought that while in certain cases Dr. Barnes' remarks might apply, there were others in which as a man of tact and experience he would probably discountenance all special, and have recourse to more general, measures.

Dr. HACK TUKE expressed his entire concurrence in the concluding sentence of what Dr. Barnes had said, viz., that gynæcologists and alienists ought to march together and afford mutual aid. They were all prepared to admit the influence of disordered menstruation, on the one hand, upon the mental functions; and, on the other, the effect of mental disorders in the production of disturbances of the menstrual function. In respect of a certain class of cases—those of alleged displacement of the uterus—he had certainly felt very strongly, and his conviction was based on many years'

experience, that disappointment often followed the intervention of the gynæcologist. He referred to some American asylums where special means had been taken to secure the examination of the pelvic organs in insane patients in whom there was reason to suspect the slightest disorder of the reproductive organs, and lady doctors had been appointed for that especial purpose. There was one lady of unexceptional accomplishments who had devoted herself to the subject, together with the medical superintendent, and their united experience had shown that in comparatively few instances benefit had been obtained from the systematic examination of the pelvic organs in the cases referred to. The net results of several years' experience were extremely meagre.

The most important question, however, was that referred to by Dr. Barnes, viz., whether any serious operative measures were likely to be of use in cases of mental disease. He had seen not a few cases in which he had very strongly hoped that some benefit might be obtained from gynæcology. With regard to oöphorectomy, he had felt special interest of late on account of several cases having come under his observation in which he would have liked to see it performed. In one case in which it was performed, the patient, with strong hereditary taint, was subject to recurrent attacks of melancholia associated with some mental stupor. The usual remedies were tried without relief. When oöphorectomy was performed, there was apparently immediate relief, and the patient expressed herself to him as quite another woman. There was some doubt, however, at the present moment, whether slight attacks had not returned. Then there were cases in which one desired very much to have the operation performed, but in which one felt doubtful whether it would be justifiable. It was in reference to such cases as these that a paper like that of Dr. Barnes' was hailed by alienists. He instanced the case of a young lady who had slight attacks of mania associated with the menstrual period which had been going on for many years. There was a history of excessive masturbation which she de-

plored, and she was a misery to herself and friends. Ought oöphorectomy to be performed in a case like that? In such a case, parents looked to the effect of the operation in interfering with marriage and objected on that ground; but he thought that they would all agree that in such a patient, the fact that the operation would interfere with reproduction could not be considered in the light of a disadvantage. He had seen several cases of epilepsy too in which he would have liked to see the operation performed, though Lawson Tait's experience had hardly been encouraging. He alluded particularly to cases of epilepsy occurring at puberty associated with masturbation. He wanted to know what objection there could be to performing the operation in such cases. He concurred in the opinion that patients who were not in a condition to give an opinion should be treated as infants. With reference to the procuring miscarriage in certain cases, he said he felt as strongly as Dr. Savage did. He mentioned the case of a lady who had had several attacks of puerperal mania and who had the misfortune to become again pregnant. The local practitioner advised abortion, but he (Dr. Tuke) said it was very unadvisable in such cases, for the patient was apt to develop eventually certain morbid broodings and remorseful scruples, the disastrous effects of which were as bad as, or worse than, an attack of puerperal mania.

Dr. MERCIER said he assumed that all the functions of the human organism were served from one reservoir of force which had to be distributed among them all, so that each function obtained its modicum of energy to keep it regular. On the other hand all the organs and functions contributed their quota to reinforce and keep up the activity of the central nervous system. Hence, if any organ were abstracted from the general whole, as for instance is the case in castration, the normal equilibrium was upset, and more or less disorder was produced in the distribution of the force, pending the re-establishment of the equilibrium under the new and altered conditions. The converse was also true, for the addition of functions tended to disturb the equilibrium.

It was to this cause that he attributed the disturbances which made their appearance at puberty, an epoch at which new functions were being added to the organism, and new organs were virtually being distributed. The redistribution of forces was effected by the central nervous system, and it might easily occur that a very profound alteration was beyond the power of the central nervous system to rectify. The distribution of forces within the body was permanently disturbed, and the reflexion of this disturbance in the highest nerve regions was the bodily condition of it might be insanity or it might be hysteria.

The discussion was then adjourned until October 22nd.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, OCTOBER 22, 1890.

C. H. F. ROUTH, PRESIDENT, IN THE CHAIR.

PRESENT : 25 Fellows, 6 Visitors.

The following were elected Fellows of the Society :—Dr. H. J. Boldt, New York ; Dr. F. R. Eccles, Canada ; Dr. J. C. Wood, Michigan ; Dr. A. P. Carbone, Malta ; Dr. J. S. Hill, London ; Mr. W. E. Cree, London ; Mr. W. J. C. Nourse, London ; Mr. F. Peck, India.

Dr. BARNES, referring to a description recently published in the *Lancet* by Dr. More Madden of an elastic intra-uterine wire stem-pessary for keeping the cervical canal open, exhibited the instrument made for him by Weiss fifteen years ago. It is made of alternate zinc and copper wires, flexible, so as to preserve patency of the cervix and to exert a slight galvanic action, thus stimulating menstruation in amenorrhœa, and involution in cases of hyperplasia.

Case of Molluscum Fibrosum Cystoma.

Dr. BANTOCK showed a specimen of what was usually known as molluscum fibrosum cystomicum, removed from a woman aged fifty some time since. The interest of the case lay in the fact that two cases of the kind had recently been reported by Dr. Joubert, of Calcutta. He was at first under the impression that he had to do with a fibroid tumour of the uterus, and he was confirmed in this view by the fact that the uterus was drawn up, as he thought, but in reality pushed up, quite above the pubes and stood out upon the anterior aspect of the tumour. The origin, however, of the tumour was from the front of the hollow of the sacrum, and had

he known the nature of the tumour in advance he would certainly not have interfered with it. Believing it, however, to be a fibroid of the uterus, he thought it desirable to operate, especially as the patient was getting rapidly worse. The rapid growth was attributable to the fact that the tumour had become cystic. One cyst cavity in the interior was capable of containing several gallons of fluid. Directly the tumour was exposed a long stretch of small intestines was seen crossing it; evidently, therefore, it was a retro-peritoneal tumour. It was not until the operation was half done that he noticed that the tumour had no connection with the uterus. In freeing the last connections of the tumour he had to employ a very great deal of force in order to tear them through. Towards the end of the operation the patient lost so much blood that it proved too much for her.

The case had an important bearing upon those reported by Dr. Joubert, and in this connection he read the following letter from that gentleman:

"6, Harington Street,
"Calcutta.

"July 21st, 1890.

"DEAR DR. BANTOCK,—I was very sorry to have to return to India before my two cases of 'Pelvic Fibrous Tumours simulating Ovarian Tumours,' could be read at the Gynæcological Society meeting, for I see by the discussion which took place on the 11th June, that they were considered to be of considerable interest. In the remarks which you were kind enough to make you say that you are 'not prepared to accept the explanation that *they* grew from the connective tissue of the pelvis, since *they* had a distinct connection with the uterus.'

"If you have a report of the cases to refer to, I think you will see that I brought the cases to notice because, though they presented precisely the same microscopic appearances, one developed in the layers of the broad ligament, and the other in the sub-peritoneal connective tissue of the abdominal

wall and of the *false* pelvis as far as the brim, only projecting merely over the true pelvis and in no way connected either with the uterus or the appendages and broad ligament.

"It seemed to Dr. Gibbons and me that if such a tumour could originate in the sub-peritoneal connective tissue in the latter situation, there was no reason why it should not also in the same tissue in the broad ligament. I am sorry I did not make this sufficiently clear, because I do not think the broad ligament tumour at all resembled a uterine fibroid, and the other and earlier case supported this opinion. The first case throws a distinct light on the second, and I think supports my contention that they were connective tissue growths of an unusual type. I did not enucleate the first tumour, for it would have meant stripping off the peritoneum from a very large surface of the abdominal walls, which, as far as I know, would have been an unwise proceeding.

"If you have the opportunity of bringing this reply before the notice of the Society, I should be much obliged, and I think it would complete the case.

"Yours truly,

"C. H. JOUBERT."

Adjourned Discussion on Dr. Barnes' Paper on "The Correlation of Disorders of the Sexual Functions in Women, with Mental Disturbances."

Dr. BANTOCK re-opened the discussion with the remark that the subject had been dealt with in three different aspects by men of the highest standing in the profession. He agreed with the views expressed by Dr. Barnes from the gynæcological point of view, as well as with the remarks that had fallen from Dr. Wilks from the point of view of the general physician, and the interesting observations of Dr. Savage. He himself had had very little experience of the graver forms of nervous or mental disturbance, but a great deal with the minor forms. He only remembered one case of well-marked mania in connexion with disease of the female reproductive

organs, and in that case there was certainly no connexion whatever between the disease and the attack of mania, for the patient had already been in a lunatic asylum before there were any symptoms of the formation of the tumour. Dr. Keith had rather thrown a bomb-shell among them by declaring that in 10 per cent. of the cases mania had followed hysterectomy, though whether as a result of the operation Dr. Keith did not say. Dr. Bantock said his experience was totally at variance with that of Dr. Keith and coincided with that of Mr. Tait, with the exception of one case in which the religious mania followed hysterectomy. The mania, however, was quite as pronounced before as after the operation, and the patient was now, he believed, perfectly well. In one case of hysterectomy, in which the patient was two and a-half months pregnant, there was a condition of hysterical mania some four or five days after the operation. He thought, however, there was sufficient cause for this, as, for instance, considerable tumefaction of the mammæ to account for the disturbance. With these three cases he was prepared to contend that Dr. Keith's experience was altogether exceptional, and need not be taken into account in calculating the possible results of such an operation as hysterectomy. He had seen a considerable number of cases of minor disturbances in connexion with diseases of the appendages, as, for example, in a woman who for nine years had been the subject of a form of melancholia. She had tried every kind of treatment until she came under the notice of Marion Sims, who after examination at once said he thought the patient could be cured. The patient was brought to this country and arrangements made for the operation. A gentleman, however, who saw her on her arrival said it was not a case for operation, and she was recommended to Homburg, &c., instead. The husband was at his wits' end to know what to do for her, and at last the patient was brought to him (Dr. Bantock), and after examination he confirmed Sims' view, not because of the presence of any physical signs indicating disease of the appendages, but from a general consideration of the symptoms. One

was pain in the region of the left ovary running up the back of the head, and one of the most frequent complaints of the patient was pain in the head. For years she has not been able to bear the presence of her husband for more than a minute or so at a time. In the course of a short consultation the conversation was sufficient to elicit the symptoms, and brought on a severe headache, &c. An operation was agreed upon, in spite of the fact that he had declined to guarantee its success. The ovaries were in that peculiar condition, which resembled a deformed bunch of grapes. Very little larger than the normal they were evidently extensively diseased. Within two months the patient was quite restored to health, and she had remained well ever since. There the connexion between the ovarian lesion and the mental disturbance was clear and indisputable. As Dr. Wilks said the great difficulty was the matter of diagnosis, and he was far from conceding the contention that every woman in an asylum ought to have her ovaries removed. That was too extreme an issue. Still in some cases the mental disturbance was directly due to the disease of the appendages while in others there could be no possible connexion between the two. He did not think it necessary to dwell upon other cases of the same character. The frequent association of hysteria with disease of the appendages was well known, and was a very curious fact. Moreover hysteria was very seldom met with after the menopause. He himself did not remember ever to have met with such a case, though patients might have been subject to it in a severe form for many years before that date. When, however, it came to removing the appendages for such diseases as epilepsy, then he thought they were treading upon unsafe and dangerous ground. He himself had never performed the operation on such a ground, but he would perhaps do so in a case of hystero-epilepsy.

He thought the discussion ought to do a great deal of good, particularly after the eloquent addresses of Drs. Tuke and Savage. Dr. Barnes' remarks were such as they would have expected from him, the fruit of mature experience guided

by sound judgment. In reply to Dr. Macnaughton Jones as to whether his experience on the subject was limited to the one case of ovarian disease, and whether the condition of the ovaries was such as would indicate oöphorectomy, he said he did not consider that the case to which he referred was a case of insanity properly so called, but rather one of profound disturbance of the nervous system. It resulted, therefore, that he had never seen such a case.

Dr. R. T. SMITH recalled that in December last he had brought forward a severe case of hystero-epilepsy, for which he had removed the ovaries, because the sister—after an abortion—had developed melancholia and died in seven weeks, and because the girl herself was beginning to show signs of mental irritability. This was a fitting opportunity to relate that the patient had been absolutely cured by the operation. She had not had a single attack since, and was in good health. Her age was twenty-five. She used to suffer from menorrhagia, but since the operation she had only been unwell three times. Occasionally patients came with genuine epilepsy associated with menorrhagia. One was anxious to do something definite, but, as a rule, the only advice gained by a consultation was to do it on one's own responsibility. He had operated once in a genuine case of epilepsy, because there was acute retroflexion. The patient improved somewhat as regards her general health, but though this was six months ago the epileptic attacks had not disappeared. Two years ago he had been consulted about a lady, aged sixty years, whose mental condition was a source of great sorrow to her friends. She came to him complaining of pain in her left side, with burning irritation in the ovarian region. He found nothing palpably wrong on examination, but she broke down again, and was taken to see Dr. Maudsley with reference to performing the operation of oöphorectomy. Dr. Maudsley said, "Do as you like. I would not blame you for performing the operation." He had not operated because the friends would not consent; and her condition had remained the same. He was glad that they had called upon Dr. Tuke at

their last meeting, and to learn from him definitely that the Americans had tried a series of cases, because he himself had long felt that he would like to do ten or twenty as an experiment. And this evening they had a corroboration much to the same effect as to the general result of operation, viz., that in cases of insanity no good results were to be got by removing the ovaries. He wished to insist upon one point of great importance—a point referred to by Dr. Wilks in reference to the adoption of children by women who were childless. He thought his observations on this point were very wise. He himself constantly advised this course with the happiest results. Dr. Smith referred to the writings of George MacDonald, who held the view that places like the Foundling Hospital ought not to exist, and that even people with one or two children ought to adopt one or two more. Dr. MacDonald had laid it down as a truth that the only persons who could really appreciate the joy and gladness of having children were those who could love them not because they were their own children, but because they were children.

Dr. HEYWOOD SMITH said the case referred to at the last meeting by Dr. Tuke was very important. The case was that of a young lady, twenty-four years of age, who began to menstruate at thirteen, very irregularly, with intervals of from one to eight months, scanty and even colourless. She had been two years under Dr. Tuke, and he would be glad to learn further details from him. She was suffering from intermittent melancholia. The attacks, however, did not synchronise with menstruation. Attacks at first lasted from four to fifteen days, but they became longer towards the end of last year, one having lasted from November to January. When well she was a bright, cheerful girl, but when she had these attacks she was prodigiously sulky. The melancholia was religious. During the attacks the pulse went down to fifty-four per minute, the normal rate being seventy-six. She had taken laudanum formerly, and had masturbated from the age of nine to fourteen. He examined the pelvis, and found that the left ovary was enlarged and tender, the right being

less so. He was frequently asked by the girl herself to operate, and in February of this year, after an attack had passed off, he removed the appendages, when he found the left ovary larger than the right, and both studded with small cysts. He had not had any information of late as to the patient's present condition. She was apparently cured after the operation, was cheerful, and had no apprehension of any recurrence of the attacks.

He was convinced that masturbation was far more common in females than was supposed, and with regard to ovariectomy—in spite of what had been said by a well-known ovariectomist at another Society—he had not found the removal of the ovaries to have any effect in lessening the sexual appetite. No operation had so marked a beneficial effect in these cases as clitoridectomy. When this operation failed it was probably because it had not been done as freely as had been recommended. With regard to Dr. Fenton's remark as to a case of apparent exacerbation after operation he observed that all major operations involved some excitement of the nervous system, and he mentioned the case of a woman who developed a violent attack of delirium tremens after undergoing ovariectomy. In spite of what had been said he still thought that in many cases of mental disturbance or even mental disease an examination of the pelvic organs was desirable, if only to eliminate those organs from the diagnosis—not so much, perhaps, with regard to tumours of the uterus as in cases of disease of the ovaries, especially as the latter condition might escape attention except at the hands of a trained gynæcologist.

Dr. HUGH FENTON observed that the general opinion of the alienists, though originally of great expectations, seemed to be one of disappointment. They had anticipated great things from the pelvic examination of their female patients, and after several years' experience they had come to the conclusion that it led to very little being done. Though that might be true of the past he did not think that it would be true of the future with the present knowledge of the pelvic

organs and their functions, and their extending experience of what the result was to the female when she was deprived of certain of her organs of reproduction. After reviewing their results he thought that great good would eventually result if gynæcologists and alienists worked hand in hand in the field of enquiry. He instanced as the direction in which research might be made the value of various forms of hallucination. Dr. Savage had called attention to certain hallucinations of smell with which was invariably associated some disordered function of the generative apparatus. He suggested that there might be other symptoms which by closer examination would be found to help them to decide the matter, when to interfere with the pelvic organs and when to let them alone. Dr. Savage related the case of a lady with dementia and hallucinations of smell on whom oöphorectomy had been performed, and this hallucination disappeared though the other symptoms did not. He said that no one who studied women or who was thrown amongst them and had to observe them could possibly overlook the fact that at certain sexual crises they were liable, with very slight determining causes, to have their mental balance overthrown, as, for instance, at puberty, marriage, maternity, and the menopause. When they bore these facts in mind it was impossible to disassociate mental disorders in the female from her sexual functions. This was certainly the case to a much more marked extent than in the male. Many points of interest had been raised upon which he would have liked to touch, but time did not allow of it. Dr. Savage had alluded to the condition of eunuchs as a sort of parallel question to that of women minus their ovaries, but he was in reality comparing things which were quite unlike. In eunuchs the testicles were removed during childhood, and consequently growth and development were profoundly influenced. When the ovaries were removed development was complete and the functions were in proper working order, so that there was no risk of altering the disposition or the appearance of a woman. As to the connexion of masturbation with insanity, he asserted that many women

whose mental balance was seriously disturbed and who were on the point of becoming absolutely maniacal or demented, in many instances undoubtedly masturbated, and, to say the least of it, rendered their condition much worse, but which was cause and which effect none could tell. If they could abate this symptom they must be doing good and promoting recovery. The value of removing the ovaries in well-selected cases was yet on its trial. He mentioned one case in which he had removed the ovaries for mental disturbance. The lady was married to a gentleman much older than herself, and she happening to be a woman of fine physique and strong passions her husband proved to be physically incapable of satisfying her too frequent demands. Eventually she became subject to sexual paroxysms associated with manifestations of violence, during which she broke furniture, injured those about her, and so forth. She had been under the care of his predecessor, Dr. Palfrey, for some years, and in order to get her away from all that might excite these outbreaks he got her to come into the London Hospital, where he removed the labia minora, which were enormously hypertrophied. She had one of the fits whilst in the hospital and ran down out of the ward and into the street in her night-dress. She subsequently left the hospital and came under his (Dr. Fenton's) care. He decided to remove the ovaries, after explaining the operation was purely empirical. In spite of her having a fit of mania within twenty-four hours of the operation, during which she tore off the dressings and sat up in bed and assaulted her nurse, she did perfectly well. That was nearly six years ago, and he had seen very little of her since until the preceding week, when he had ascertained that the paroxysms had been very few in number, the intervals between having gradually become longer and longer, only one or two a year, and when they did occur they were shorter and less severe. He thought that this case would serve as a precedent. Her age was thirty-two when the operation was performed.

Dr. PERCY SMITH pointed out that hallucinations of smell, &c., occurred in males as well as females, and were frequently

associated with alcoholism and epilepsy. Such hallucinations were frequently, but not necessarily, associated with disorders of the generative organs.

With regard to symptoms which might be associated with disorders of the pelvic organs coinciding with insanity, amenorrhœa ought first to be mentioned. This was present in nearly all cases of acute insanity, but the amenorrhœa was certainly as a rule only a symptom of the general disorder and not dependent upon local disease. He held, therefore that to examine the uterus of every woman who came into an asylum, especially the single women, would be hardly justifiable. One was frequently consulted on this point, and he mentioned the case of the girl who had an attack of acute melancholia of six months' duration who recovered as regards the mental condition, but menstruation did not return. Her friends wrote suggesting the desirability of local treatment, but he did not think fit to adopt the suggestion and the result justified his reserve. Then again in puerperal cases, amenorrhœa persisted for some time, and recovery would only be complete when menstruation returned. There, too, local treatment would as a rule do no good. He also alluded to the case of an adolescent girl who had menstruated regularly, but she broke down mentally, and this was associated with amenorrhœa. The friends wrote him an extraordinary letter saying they were convinced by the movements of her mouth there was some constriction about the womb for which she ought to be operated upon. She had previously been taken to a hospital for women, and there they were told that it would be absolutely necessary to dilate the cervix. The general practitioner, however, under whose care she had been, disagreed with the advice and sent her to Bethlem. The patient had a further attack of mental disease there, and then recovered from both. Two or three years later she broke down again, but of course this was common enough in adolescence. Some cases of masturbation were certainly due to local causes, but in many cases it was merely a symptom of loss of control associated with mental disease. In such

cases the treatment should be directed to drawing the patient's attention from her genitals. He mentioned the case of a young girl described as an inveterate masturbator who became melancholic. They ascertained that clitoridectomy had been performed without any effect in modifying the habit, and it was suggested that oöphorectomy should be performed. He, however, decided not to meddle any further and trusted to general treatment, and she eventually recovered completely and ceased to masturbate. With regard to uterine displacements in association with insanity he had very little experience about the slighter forms of mental disease being cured on the displacement being relieved, for such cases did not come into asylums for the insane, but he did meet with cases of considerable displacement of the uterus which had been remedied without preventing the breakdown, and in which insanity supervened even while undergoing the treatment. He alluded to a case in which the mental breakdown occurred while the patient was actually in a hospital for women. A pessary had been inserted but was removed as a possible source of excitement. No local treatment was resorted to at the Bethlem Hospital, and she ultimately recovered. In another case from the Chelsea Hospital in which insanity broke out while under treatment, she also recovered without further local treatment. The same remarks applied to prolapse of the uterus when coinciding with insanity. He mentioned an interesting case in a woman who had puerperal fever after her first child, and ever afterwards at each confinement she got under the impression that something wonderful was going to happen—in fact, her uterus became the centre of her life. After the fifth child a severe attack of melancholia occurred and she was a year in the hospital, being at present out on leave of absence. In that case too the uterus was judiciously neglected, menstruation had returned, and she was better again. Another case was admitted after having undergone Alexander Adams' operation. Fourteen days after leaving the hospital for women she became maniacal

and was admitted to Bethlem but recovered without any local treatment. With regard to oöphorectomy he knew of one case admitted to Bethlem two or three months after the patient had been operated upon, and she had developed an acute attack of melancholia. The operation was performed on the ground that the patient seemed worse at the time of her periods, but the mental symptoms were aggravated instead of being improved. She remained eight months in the hospital and then recovered perfectly.

With regard to Dr. Barnes' suggestion to examine the uterus in all cases of puerperal insanity, he observed that it was often impossible to examine the uterus in a violent patient, and he doubted whether it would be justifiable in any such case to do much in the way of local treatment. Speaking generally, one did not make a practice of examining the pelvic organs in cases of puerperal insanity, unless there were special indications of something wrong. Moreover, 80 per cent. of the cases recovered without any sort of local treatment. It was impossible to go into all the varieties of insanity associated with disordered sexual functions; many of them, however, recovered without local treatment. He said that it might be thought from his remarks that they did not examine the uterus at all, but this was not so. He mentioned the case of a patient with menorrhagia, who was examined and was found to have chronic enlargement of the uterus. Dr. Galabin had scraped out the uterus, and the patient recovered, but the improvement in the mental condition had begun before the operation. He quoted the case of an old woman who had the delusion that she was nightly ravished, and Dr. Cullingworth was asked to ascertain whether there was any local cause for it, but nothing was found. This confirmed their impression that the condition was a psychical one.

Dr. MACNAUGHTON JONES said that no gynæcologist of any experience could have any doubt as to the association between certain minor conditions of mental disturbance and disease of the sexual organs. As to the proportion of these

cases that directly led up to more serious disturbance of function, and to true forms of insanity, he believed that it had never been made out. There was a mystery about it, and nothing that had been said bore on the point. So far as his own personal experience went, he had seldom been able to trace the connection as cause and effect. There were doubtless exceptions, however, to the general experience. He mentioned the case of a lady suffering from fibroid tumour, who had a fixed delusion that during an examination the uterus was dragged from its position and inverted, giving rise to a condition from which she had never recovered. Another case was one of retroflexion with enlargement of the ovaries. This enlargement was periodical. The lady was thirty years of age when she came under his care. The retroflexion was reduced, but the ovaries did not diminish in size, and she remained under treatment for some time. Her case was, however, not severe enough to warrant oöphorectomy. She suffered from melancholia and delusions regarding her parents. The uterus was replaced; the ovaries gradually reduced in size. She has quite recovered. He wished to emphasize one sentence in Dr Barnes' paper in which he alluded to an antecedent nervous condition as predisposing to the graver forms of insanity. This was just such a case. He did not think that it would be possible to point to any particular disturbance of the pelvic viscera which led to insanity. He had examined cases several times in which there were hallucinations or delusions without being able to detect anything wrong. Dr. Barnes spoke of an initial process in insanity, viz., thrombosis, and he said that certain conditions of the sexual organs would conduce to such a state. The fact had frequently struck him as peculiar that while they had often marked general nervous conditions, as, for instance, affections of the spinal cord, retina and auditory nerve, which testified to direct local congestion and the previous occurrence of thrombi, and though they had these marked material evidences of correlative results following upon certain pelvic disorders, they were not associated with that degree of mental

disturbance which amounted to insanity. On the preceding day he had been called to a lady, who four years ago had received a shock during a pregnancy. She was confined in due course, but from the time of the shock her vision began to fail. She had now double optic neuritis. After labour the catamenia did not return, and she had not menstruated for three years; she had been treated for retroversion. She experienced at the present time those hallucinations of smell alluded to by Dr. Savage; there were exaggerated reflexes and every evidence of distinct disturbance of the nervous system, but no symptom of any serious aberration of the mind. His opinion had been greatly strengthened by the direct answer of Dr. Bantock, that with all the ovariectomies he had performed, and with his large experience of ovarian disease, he had not been able to trace any connection in a single case between these ovarian conditions and any seriously disordered mental function. He did not think the discussion had thrown much light on the real correlation existing, and as to the deductions to be drawn. It would, however, do much practical good by leading to a record of cases and more accurate observation on such associations.

Dr. LANKFORD (of Virginia, U.S.A.), gave the results of the experience at three asylums in Virginia, two for white persons and one for coloured people, between the years 1882 and 1887, and they were distinctly unfavourable.

Dr. BARNES, in reply, said that the various speakers had answered the questions that had been put, and the object of his paper had been achieved in calling forth so many able commentaries thereon. That was his best excuse for bringing forward a paper on the subject. It challenged inquiry and invited statements bearing on the results of experience. His object was to institute a comparison between the views in all branches of the profession on the subject. It was quite certain that no gynaecologist could be thoroughly alive to all the bearings of the subject in its relations to insanity; nor could the specialist in insanity be expected to know what the gynaecologist knew. There was one fact which he might

state as an encouragement to persevere in the inquiry. It had been said that nothing much had come of the discussion ; but that on the other hand there may be cases of disease which did not burst out into open insanity. To those who were disappointed he would say that surgical gynæcology had only been known for the last twenty years, and there had been no time to enlarge upon these points. The objection had been urged that they had no great body of facts to bear out their contention, but these would come with time, though he was not sanguine as to succeeding in curing the greater number of cases of insanity by gynæcological treatment. Still there were a large number of cases which might be relieved *pro tanto*. He pointed out that they were daily applied to by numbers of women for the relief of disorders of the sexual organs, and they came because they suffered ; and he asked why insane patients should not receive whatever relief could be afforded as well as the others. Did they not suffer like their sisters ? The treatment of such diseases might often be undertaken quite independently of any idea of curing the mental condition, but simply for the purpose of relieving physical distress. That alone was enough to justify further inquiry. He was very much interested in what Dr. Percy Smith had said. He had investigated it fairly in some respects, but he recommended him to pursue the inquiry and open his mind to the possibility of the more frequent association of mental disease with sexual disorder. Dr. Savage was against inducing premature labour in women who were insane. That would depend upon whether the insanity came on in the course of pregnancy (and it was scarcely likely to come on before). Dr. Savage said he had seen several cases of insanity in which premature labour occurred without any benefit, but he (Dr. Barnes) would point out that there was a great difference between inducing it and allowing it to come of itself. The condition might become incurable in the interval. His own experience had been against Dr. Savage's conclusion. He had seen cases in which he had afterwards been grieved not to have had the courage to induce premature labour, for they had gone on from bad to worse and some died. He had

induced premature labour in a number of cases with the happiest results. When pregnancy was complicated with any disease which might or might not be removable, their duty was to remove one factor of the morbid condition—the one that could be most readily attacked, and that was often the pregnancy. It reacted upon the entire organism, and the chances of the patient getting better were considerably enhanced. He urged, therefore, that this ought to be done in suitable cases. He believed that in many cases of masturbation it was impossible to detect any local lesion, but that was no reason for not endeavouring to ascertain the existence of such a cause. The point that had been raised as to the perversion of smell was interesting, and it was sometimes associated with hallucinations of the sight, &c. The curious case narrated by Dr. Savage, of women assuming masculine attributes, and *vice versa*, illustrated one of the difficulties with which they had to contend. That the phenomenon was sometimes associated with degeneration or imperfect development of the generative organs had been known more or less for years, before eunuchs or spayed women were known. Might not the classical history of Tiresias be called to mind? He would not discuss the question of clitoridectomy. What he had seen of it in Baker Browne's time was not at all satisfactory. At the same time there might be cases calling for it. In reference to the fifteen cases of oöphorectomy mentioned by their American visitor, he observed that the cases seemed to have been taken somewhat indiscriminately, and of course no good result could be expected unless there was a distinct indication for operation. Dr. Tuke was disappointed at the view taken by gynæcologists in reference to insanity. He reproached them with not doing enough; but he said they were on the way, and with his enlightened liberality of views it would go on to elicit more practical information. The point which was really of importance was that, although they had a number of cases of uterine disease which did not culminate in insanity, many went very near it, and were saved by timely treatment.

The Society then adjourned.

ORIGINAL COMMUNICATION.

An Ideal Operation for the Cure of Rectocele. By HORACE TRACY HANKS, M.D., New York City, Professor of Diseases of Women, New York, Post-graduate School and Hospital, Surgeon to the Women's Hospital.

I have been pleased with my results in the use of catgut buried sutures in gynæcological work as advocated by Dr. Martin. We are now as sure of getting as good an article of catgut as we were formerly certain of getting only a *poor* quality. For three years I have experimented with the catgut buried sutures in operating upon the posterior wall of the vagina for the cure of rectocele. My results have gradually improved, and to-day this condition does not seem the formidable lesion which at one time I considered it. Surely, when results have been so imperfect in the past, we are justified in reaching out for better things, because here *sui non proficit deficit*.

We certainly have made improvements in the suture material and in the manner of making the denudation. The results of my later operations have fully justified me in making this statement.

I claim no priority in advocating certain steps which I take in the operation which I now describe. I have learned much from Dr. Martin about the suture material, from Dr. Emmet about suturing the vaginal wall, and from Mr. Tait about flap splitting, and making the weakest part *before* the *operation*, the *strongest* part after the operation. I have combined simple principles, as worked out by other men, and believe that if we adopt them in operating for the cure of rectocele, this condition will no longer be the *bête noir* of the gynæcologist.

I thoroughly prepare my patient before operating. It is better to wait, even four weeks, rather than to operate when she is convalescing from some disease, or only half recovered from some previous gynæcological operation. Her bowels are to be moved daily for a week, using saline laxatives, or compound cathartic pills as needed, that no hardened fæcal matter may remain in the lower bowel. I insist upon the most rigid antiseptic precautions before and during the operation. The patient is placed in the usual position, after the anæsthetic is administered, an assistant on either side steadying each thigh. I invariably stretch the sphincter ani thoroughly, that under *no circumstances*, for the present at least, it can contract *spasmodically*, and cause the bulging of the rectal pouch. The neglect to do this is often and generally the cause of failure. If the uterus is easily prolapsed the operation on the posterior wall can be commenced by seizing the posterior lip of the cervix with a small double tenaculum and drawing it towards and through the ostium vaginæ. Press it up in front of the meatus, then with another tenaculum inserted into the tissue just above the anus and separating the two instruments, the posterior wall of the vagina wholly exposed is kept tense, and ready for the median incision.

The assistant on the left is directed to hold the parts thus, while the operation is proceeded with. If the uterus *cannot* be prolapsed two retractors must be placed laterally in the vagina, and the two double tenacula or light vulsella forceps inserted, the one at the apex of the bulging vagina, and the other just in front of the anus. The parts thus exposed, the cutting operation should be begun by making with a pair of sharp-pointed scissors an incision from below upwards, from the vulsella at the posterior fourchette to the instrument above or near the posterior lips of the cervix. I cut deeper at the perineum, down nearly to the sphincter, and only through the mucous membrane above, as the thin attenuated tissue at the rectocele is reached. I dissect back to the right and left from this median incision between the two double tenacula. The depth of this dissection must necessarily vary with

different patients, but in all cases the dissection should be at least an inch to the right and to the left at the perineum, and a full half-inch to the right and to the left at the point of most bulging, and from here to the distal end of the incision a quarter of an inch only will be required. More or less bleeding necessarily follows, but with constant hot water irrigation and fine catgut ligatures, all hæmorrhage ceases or is checked quickly.

Now expose the parts thoroughly by seizing the edges of the flaps with tenacula and decide if it is necessary to make more or any changes in the dissection. Commence suturing the base of the flaps together at the distal extremity of the wound. Use a No. 2 or 3 catgut, well prepared and sure of lasting six days before absorption. Use a strong, sharp, small needle, slightly curved at the point, about two-thirds of an inch in length. Commence by inserting the needle at the base of the right flap in the wound, near the upper end of dissection. Pass the needle downward towards the rectum, then turning it upwards pass it into and catch the base of the flap, and then commence on the opposite side and catch up a part of the base of the flap (the raw surface of course), then pass it downward towards, but not *into* the rectum, then upwards again and tie the suture. The same process is to be repeated every one-third of an inch, making a glover's stitch after the first suture is fastened. As the region of the perineum is approached two rows of deep sutures can be made if thought necessary. After these deeper sutures are all inserted the free edges of the flaps must be carefully approximated and held with tenacula in the hands of the assistants and fastened with No. 1 catgut glover's stitch suture. In closing the flaps, commence at the distal extremity and finish at the new posterior fourchette. These last sutures should be quite near together.

The manner of inserting the deep or buried (No. 3) catgut suture is all important. The needle must be held at right angle to the needle holder and inserted at right angles to the longitudinal fibres of the vagina, or, in other words, parallel

to the circular fibres of the vagina. If the needle is inserted in an opposite direction, so much of the base of the flap will be strangulated that sloughing will surely follow from ligation of the small arteries in this locality.

When the operation is finished the rectocele has entirely disappeared, and on the floor of the vagina is a ridge, or rib, which prevents all bulging in this locality. Later, when the healing process is completed, this ridge or rib will prevent the accident occurring again, unless under unusual provocation.

The after-treatment consists in giving the patient good nutritious food, in moderate quantity frequently, with some saline laxatives—often combining a teaspoonful of sulphur with the other laxatives. Under no circumstances must the patient be allowed to strain at stool. I impress this important rule upon all my patients.

My results have been greatly improved since perfecting this course of treatment.

Hoping that there may be some suggestions which may help others who have had less opportunity to experiment in this line of work, and who are over anxious because of past failures, is my only excuse for presenting this short paper.

New York, August 7th, 1890.

REVIEWS.

Annual of the Universal Medical Sciences: A Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by CHARLES E. SAJOUS, M.D., and seventy Associate Editors, assisted by over two hundred corresponding Editors, collaborators and correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. F. A. Davis, Publisher, Philadelphia, New York, Chicago, Atlanta and London, 1890.

The editor of this laborious and exhaustive work, which is now looked forward to with interest every year by the whole medical profession, has had to encounter unusual and unforeseen difficulties in the preparation of this year's Annual.

He states in the preface that :—"The preparation of this year's Annual was, indeed, an arduous task, over one half of the editorial staff having been prostrated by the epidemic of influenza, which prevailed at the time the several sections were to be written. This, combined, with illness among the assistants of the central department, rendered it impossible to finish the work as promptly as usual. While craving the indulgence of the readers of the work, the chief editor wishes to impress them with the fact that everything possible was done to avoid the twenty days' delay, and that words can hardly express his gratitude to the members of the associate staff; several of those undertook their laborious tasks when hardly able to leave their beds."

The improvements in this year's issue mainly consist in the creation of departments on subjects heretofore considered under general heads. Syphilis, for instance, under the editorship of Professor J. William White, of Philadelphia, appears

as a special section, replete with information that could hardly otherwise be presented satisfactorily. Surgical Mycoses, edited by Professor Ernest Laplace, of Philadelphia, is another subject so treated, while that of Thoracic Surgery, by Professor J. McFadden Gaston, of Atlanta, forms a special department, the value of which will become apparent. Several sections will be found to have undergone modification of value to the general practitioner. That of Oral Surgery, under Dr. R. Matas, of New Orleans, will be found to contain a review of the minor surgery of the teeth, limited in extent to the necessities of the physician. The department of Orthopædic Surgery, under Professors Lewis A. and Reginald H. Sayre, of New York, has also been extended in scope ; while that of Bacteriology, under Dr. Harold C. Ernst, of Boston, has received considerably more space. The section of Therapeutics, by Dr. J. P. Croger Griffith, and H. W. Callell, also contains a *résumé* of the therapeutical application of hypnotism.

The review which is presented of the work done in gynæcology throughout the world during the past year is complete, and omits nothing of the smallest importance or interest. As we ourselves take note of nearly everything that appears in gynæcology, we are in a position to make this statement. We strongly advise every medical man who wishes to possess a true mirror of medical and surgical progress to purchase a copy of this most admirable work.

Sterility in Women, including its Causation and Treatment.

By ARTHUR W. EDIS, M.D., F.R.C.P., Senior Physician to the Chelsea Hospital for Women, late Obstetric Physician to the Middlesex Hospital. With thirty-three Illustrations. H. K. Lewis, London.

When Dr. Edis published his "Manual of Diseases of Women" in 1881, he gave a short account in it of sterility. As the second edition has now been out of print some years, he has reproduced that portion of his work dealing with

sterility with considerable additions. He has embodied the treatment of most of the important conditions generally met with preventing conception. A series of cases illustrating the method of treatment, both in primary and acquired sterility, has been appended. Some of the figures given by Dr. Edis are of interest. He says :—"A certain number of women in every community will be found to be so [sterile]. Among 495 marriages in the British peerage, 81 were unproductive, or 1 in $6\frac{1}{2}$ were without any family—that is, about 17 per cent. Of 675 marriages among the agricultural and seafaring, 65 were sterile, or about 1 in 10." The author has produced a thoroughly practical book. It is evidently the work of one speaking from large and extended experience. The long list of causes of sterility is carefully set forth. As regards the treatment of these conditions, the author is very careful to enter into all details necessary to secure success. The illustrations are all to the point. The work will be read with profit alike by the gynaecologist and the practitioner.

OBITUARY.

LOUIS ADOLPHE NEUGEBAUER, M.D.

LOUIS ADOLPHE NEUGEBAUER, M.D., Councillor of State, Professor of Gynæcology at the University of Warsaw, Physician to the Hospitals of the Trinity at Kalisz (1850 to 1855), the Infant Jesus at Warsaw (1858 to 1862), of the Holy Ghost at Warsaw (1862 to 1890), and of the Red Cross, at Warsaw, died suddenly at Berlin on the 9th of August, 1890. His death took place one hour after the last meeting of the Tenth International Medical Congress. He was dead in the arms of his son, Dr. Francis Neugebauer, three minutes after an attack of apoplexy.

Although he had attained the age of seventy years, and had lost the sight of his right eye through cataract, and that his general health had not been good for some months, there was no reason to fear such a speedy end. His boundless love for the progress of medical science drew him, old as he was, to the Berlin Congress, whence he was destined never to return. He had passed seventy years in assiduous work full of sacrifice of every kind, but crowned by the most honourable scientific results. He will long be remembered in his *clientèle* for his sympathetic manner and his profound knowledge of his art. The scientific world and the universities will deplore the loss of a talented teacher as well as a successful and brilliant operator. Medical science in Poland has suffered great loss in Louis Neugebauer, who, in addition to his personal practice extending over a period of more than forty years as accoucheur and gynæcologist, had taught his art to several generations of medical men. He was born at Kalazis, in Poland, on the 6th May, 1821. He studied at Dorpat and at Breslau, where he took the degree of Doctor of Medicine and Doctor of Obstetrics in 1846, after having



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won three gold medals by three of his theses. He then took a scientific voyage through France, where he followed the lectures of Velpeau, Malgaigne and Ricord. Later on he was with Dieffenbach at Berlin. Vienna, Prague and Northern Italy were also visited. He remained during a period of ten years as *chef de clinique* in the service of Professor Betschler at Breslau. In 1850 he returned to Poland, where he commenced his laborious and conscientious work, which resulted in the addition to medical literature of no less a number than one hundred and twenty-seven published works. Among these there is a series of considerable works, as well as critical communications in gynæcology, and studies in the history of medicine, anthropology, physiology, surgery, meteorology, botany. The British Museum in London possesses several specimens of meteorite, which he had picked up himself in the environs of Rustusk in Poland.

The following is a list of some of his works :—

Systema Venosum Avium, 1845.

The Hospitals of Paris, 1848.

On the Scientific Collections of the Jardin des Plantes at Paris, 1848.

On the Cholera, 1848.

Duplex body in a Hare, 1854.

Morphology of the Umbilical Cord, 1858.

A New Speculum, with a Complete History of the Speculum, 1856. This was published in French by his son, Dr. Francois Neugebauer, in 1884.

Description of Human Anatomy after Hyrtl, with illustrations in Polish, 1860.

Studies and Experimental Researches on the Diaphanoscopy of the Cavities of the Human Body, 1868.

A series of Ovariectomies and Hystromyotomies which he had practised after a special journey to Spencer Wells, of London, and Koeberle at Strasbourg, 1868.

We may here mention that Louis Neugebauer was the first surgeon who performed ovariectomy in Poland.

A series of Clinical Communications of Urinary Fistula,

of which he had performed upwards of 400, by the aid of an instrument invented by himself, and exhibited later on with success by his son, 1884.

A series of Monographs on Atresia of the Genital Passages, Inversion of the Uterus, Prolapse of the Uterus, the operation of Median-Colporrhaphy, on different Tumours of the Genital Organs, different Observations in Obstetrics, and the Kyphotic Pelvis, 1863.

In addition to his bilvalve and trivalve specula, Louis Neugebauer enriched the gynæcological armamentarium by the addition of various instruments for vesico-vaginal fistulæ, as well as an important modification of the midwifery forceps. He also constructed a gynæcological operating chair. He was the inventor of a suture by pins armed with little moveable balls. In addition to published works he left his son a rich gynæcological library and a series of unpublished manuscripts, which he was prevented from finishing by his cataract. Bibliographical Index of Obstetrics and Diseases of Women from Antiquity down to present Time; On the Birth of Double Monsters; On Foreign Bodies in the Bladder; On Labour in Aged Women. A large collection of diagrams and entomology. Endowed with a genial spirit and extraordinary vivacity, Louis Neugebauer took a lively interest in all branches of science (*nulla dies sine lineâ*).

During the whole of his life he collected his personal observations and spent his leisure moments in writing them down and classifying them; he thus came possessed of an encyclopædic knowledge rarely met with in the present day. Louis Neugebauer was in personal relation with the whole scientific world, travelling as he did, year by year, in order to see for himself the progress of science of each nation. He knew nearly all the great towns of Europe, their hospitals, their medical celebrities and their peculiarities. On his return home he used to classify his personal impressions, and thus left an autobiography of twenty-four volumes illustrated by a large number of drawings. He had read a paper at the third sitting of the Berlin Congress on "The Hydrostatic Treatment of Chronic

Inversion of the Uterus" four days before his death. It is said that he never knew leisure or repose.

His name was known to the scientific world from 1856. He was a member of thirty-four different medical societies in Europe and America, and it was only ten days after his death that the diploma of honorary member of the Obstetrical Society of Edinburgh was sent to him. He was called from Kalisz to Warsaw in 1857 to teach anatomy. In 1859 he began his lectures on "Midwifery and Diseases of Women," which he continued in his clinique of eight beds until the time of his death. He lectured at the Medico-Chirurgical Academy at Warsaw, then at the principal school, and lastly at the university which was founded 1869, after having learnt the Russian language at forty-eight years of age. In 1889 he received the title of Doctor of Medicine of the University of Karkoff, *honoris causâ*.

Professor Neugebauer was well known as a brilliant operator as well as a keen diagnostician. It may be said that the words of Horace which he chose as motto for his first thesis applied with singular force in his case—"Est quôdam prodire tenus, si non datur ultra."

JAMES MATTHEWS DUNCAN, M.A., M.D., LL.D., F.R.S.

We have to record the premature death of one of the most prominent obstetricians in London. He was a native of the city of Aberdeen, where he was born in April, 1826. He was educated at Marischall College and studied medicine at Edinburgh and Paris. After graduating at Aberdeen he became assistant to Sir James Simpson. He was Physician to the Royal Infirmary, Edinburgh, and Lecturer on Midwifery. In 1857 he gave out some very characteristic opinions on ovariectomy: "Is ovariectomy justifiable or not?" The *British Medical Journal* says:—"On the evidence of the statistics of that time he condemned ovariectomy, and much later, guided by his instincts, which were essentially those of a conservative

teacher, he refused to teach that any such operation was justifiable, till long series of statistics, furnished by reliable experts, proved that the risk was very slight."

Dr. Matthews Duncan was not an ovariologist, and it is not therefore surprising that he was unable to form a just appreciation of a surgical procedure which he himself did not practise. In 1866 his work on "Fecundity, Fertility, and Sterility," appeared—the foundation of his Gulstonian Lectures delivered after he came to London.

In 1868 he published his "Researches in Obstetrics." At that time he was Lecturer on Midwifery in Surgeon's Hall Medical School; Physician for and Clinical Lecturer on Diseases of Women in the Royal Infirmary. In 1869 he published a practical treatise on "Perimetritis and Parametritis." The following works from his pen appeared in succession: 1870, "On the Mortality of Childbed" and "Maternity Hospitals;" 1875, "Contributions to the Mechanisms of Natural and Morbid Parturition;" 1879, "Papers on the Perineum;" 1879, "A New Edition, with Additions of West, on the Diseases of Women;" 1879, "Clinical Lectures on the Diseases of Women" (successive editions of this work each greatly enlarged, appeared in the years 1883, 1886 and 1889); 1884, "Sterility in Women." Dr. Matthews Duncan was in busy practice until early in the spring of the present year.

He commenced his Summer Course of Lectures in May and appeared to be well and in his usual health. On the 4th of June he spoke for the last time at the Obstetrical Society of London. At the end of the month his health broke down completely, and he relinquished his Hospital practice. On July 26th he went to Blankenberghe, where his condition improved, and he took to sea bathing. At the end of a week spent at the Belgian watering-place, in company with Sir W. Turner, he left and proceeded with his family to Baden-Baden. On August 17th he was seized with a violent attack of angina, and similar attacks occurred on the 18th and 19th.

Dr. W. H. Gilbert, of Baden-Baden, was called in, and under his care the patient obtained great relief. On August



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20th Dr. Aldren Turner arrived at Baden-Baden in answer to an urgent summons, and found Dr. Duncan in a very weak condition, with œdema of the lungs, orthophœa, albuminuria and slight anasarca. There was complete loss of appetite. The œdema of the lungs was greatly relieved by cupping; within five days the patient could lie down without suffering from dyspnœa, the appetite had returned and a few days later albuminuria disappeared.

Arrangements were made to remove Dr. Duncan to London on September 2nd. At 5 o'clock in the afternoon of September 1st, as he lay in bed comfortably supported by pillows, breathing suddenly became stertorous. Dr. Turner, who happened to be standing on the balcony of the apartment, having heard the sound of laboured breathing, went into the room and found that Dr. Duncan had expired.

The funeral service was conducted in part at St. Mark's, North Audley Street, on Monday, Sept. 8th, the Rev. Borrodale Savoy, Rector of St. Bartholomew's the Greater, officiating. The Queen was represented by Dr. Quain, F.R.S.; the University of Edinburgh by Sir William Turner, D.C.L., Professor of Anatomy in the University; and the Royal College of Physicians of London, in the absence in Scotland of the President, Sir Andrew Clark, by Sir Risdon Bennett (an ex-president), Sir Henry Pitman (Emeritus Registrar), Sir Henry Acland and many of the Senior Fellows. A large proportion of the past and present staff of St. Bartholomew's Hospital, of leading obstetricians in London, of former pupils of the deceased from all quarters, as well as friends in other professions were present. The interment took place at Islington Cemetery, East Finchley, the Rev. H. J. Nixon, curate of St. Mark's, officiating. Dr. Duncan married in 1860 Miss Jane Hart Hotchkis, daughter of the late Mr. Hotchkis, of Castle-milk, Dumfriesshire. Mrs. Duncan and five sons and four daughters survive him.

Dr. Duncan was a Fellow of the Royal Society, LL.D. of Edinburgh and Cambridge, Honorary M.D. of Dublin, and Fellow of the Royal College of Physicians of London. At

different periods he was Examiner in Midwifery to several universities and colleges, and was also an honorary member of British and foreign learned societies. He attended Her Royal Highness the Duchess of Albany in her confinement, and had a large and fashionable practice in London at the time of his death. The *Edinburgh Journal* says:—"Dr. Duncan's style of writing is strong and lucid, but not elegant. His sentences are short and vigorous, and every word is meant to tell; this compression makes some of his works, especially that on the 'Mechanism of Parturition,' far from easy reading. His opinion on any of the subjects with which he dealt was always one that had to be reckoned with, and already much of his work has found its place among the accepted doctrines of Obstetrics. But beside and above his professional achievements, he has left behind him the unblemished record of a manly, upright, honourable character. In the words of the late Dr. John Browne in describing him:—"I know him as a man of genuine capacity and worth, strong-brained, right-minded, true-hearted, with that deep abiding sense of the sacredness of truth in everything—in observation, inference, and statement, not less than in word and deed, in science not less than in life, without which genius, learning, and eloquence, be they ever so great, must be mischievous."

"The nobility of Duncan's character was never more marked than in the last weeks of his life. He felt that, owing to his impaired health, his work in this world was coming to an end, and that his duties as a teacher and hospital physician had drawn to a close; whilst even if he lived the extent of private practice would have to be much curtailed. But never a murmur escaped him. He was most considerate to the members of his family and those friends who were about him, and thought much more of their wishes than of his own. He had no fear of death, for he had lived so as to be always prepared for it."

The portrait which we present is printed from a photograph by Mr. A. Bassano, of 25, Old Bond Street, London, W.

*SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.*

DUBLIN MEDICAL PRESS.

Perinæorrhaphy without Flap-Splitting: a new Operation for repair of Lacerated Perineum. BY ALEXANDER DUKE, F.C.P.I., Gynæcologist Steeven's Hospital, ex-Assistant Physician Rotunda Hospital, &c.

I wish to bring before the notice of my gynæcological brethren an operation I have designed for the restoration of a lacerated perineum, easy of performance, and which will, when properly executed, form a good perineal floor, and I might almost say practically a new perineal body. The patient, having been prepared by the usual preliminary steps required for the old operation when under the influence of an anæsthetic, is placed in the lithotomy position, the left index finger being introduced almost its entire length into the rectum; a long straight double-edged bistoury is made to pierce the tissues *in front of the anus at right angles to the vulva*, and, guided by the finger in the rectum, is made to penetrate the septum for two and a half inches upwards, the incision being enlarged laterally to two inches as the knife is withdrawn.

The patient is then turned on her side, and on the points of incision being pressed together, a lozenge-shaped opening will be seen, and when all sutures required have been introduced and are properly adjusted and approximated, the two cut surfaces are brought into direct apposition. The sutures are introduced by a strong cycle-shaped needle with eye near point, mounted on a handle, strong silver wire being the suture preferred.

The needle is introduced at edge of incision, and guided

by a finger in the rectum, is made to travel under the cut surface to its full depth above, describing the arc of a circle; and, on point of needle appearing *directly opposite* it is threaded with suture and drawn through. On the ends of this suture being drawn together with the fingers, a good idea can be formed of how many additional stitches may be required. When all considered necessary have been inserted and approximated, a finger of each hand passed into rectum and vagina will at once recognise the gain in thickness of septum, the external tissue being pushed fully an inch forward from anus, and forming a thick and solid perineal body.

The incision being a deep one, on union taking place between the raw surfaces, a considerable amount of support must be afforded in cases where a pessary is required, or where there is much tendency to prolapse of uterus or vaginal walls. My experience of the operation, though up to the present limited, has satisfied me with the results, and there being *no loss of tissue whatever*; should the operation fail, it cannot add any difficulty to a subsequent one.

Even should the perineum be lacerated to verge of anus, what I describe can be done. I find that leaving the sutures for ten days is generally sufficient, but if I am in doubt as to the union being strong, I cut the wire, but leave it *in situ* for a day or two longer, thus affording some support, and relieving the strain on the edge of suture holes, and I also support the parts by long strips of adhesive plaster carried from hip to hip over the new perineum.

The wire should be stout and not too tightly twisted. My friend, Dr. More Madden, has kindly given my operation a trial, and was much pleased with the results, especially in one of his cases where the old plan of operation had been tried previously but failed owing to the patient's poor state of health and want of healing power. The advantages of my plan of operation are briefly these:

- 1st. The simplest of performance as yet proposed, no danger of hæmorrhage, the surface when dry being brought together.

2nd. No danger of sepsis, as the incision is not open for the admission of any discharge from either vagina or rectum during healing process.

3rd. No loss of tissue, and consequently no harm done should the operation fail.

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF
CHICAGO.

Regular Meeting, April 18th, 1890.

The President, JAMES H. ETHERIDGE, in the Chair.

Vaginal Hysterectomy, with Specimen.

Dr. FRANKLIN H. MARTIN : There is nothing of peculiar interest about my specimen ; it is simply a case that I wish to put on record of vaginal hysterectomy for cancer of the cervix. I saw this case first about six weeks ago. The cervix, extending to the right of the vaginal junction, exhibited an ulcerated surface of a carcinomatous appearance. A specimen was removed at the time, examined, and pronounced carcinoma. At the same time the cervix was thoroughly scraped down to as near the healthy tissue as I could get. The patient was then left until I could hear from the microscopic examination, or until some signs of the disease should reappear. In about three weeks the old trouble returned. I watched it for some time, until it began to involve the vagina, and advised the operation of vaginal hysterectomy. Mrs. H., age thirty-six, who had had one child and three miscarriages, was therefore operated upon in this manner January 15th, 1890. The bases of the broad ligaments were ligated with silk, and for the remaining portion of each broad ligament a clamp forceps (Byford's pattern) was used. The operation was performed without difficulty or complications, and the patient was discharged in about four weeks. I have seen her within the last two or three days, and she is well.

Nephrectomy, with Specimen.

Dr. HENRY T. BYFORD : This is a suppurating kidney removed early. Patient, Mrs. S., was thirty-one years old ;

married five years ; no children. She has had periodic attacks of septic fever for over a year. The temperature would reach 103° to 104° F. during the attack, with great tenderness in the right side of abdomen. After a discharge of pus and granular material with the urine the symptoms would subside for a time. The organ was felt to be enlarged at each examination. The kidney was removed through an incision made in the linea semilunaris, through which the other kidney was first palpated and found to be healthy. The tissues about the diseased one were healthy, but the uterine appendages were extensively diseased. I completed the operation by establishing drainage with iodoform gauze through a small opening in the lumbar region, and closing the abdominal incision completely. The ureter was ligated with fine silk at about one and one-half inches from the kidney, and placed so that any suppuration that might arise from it would find its way out through the lumbar opening. The temperature remained between 99° and 100° F. for a few days, and then became normal.

(1.) *Probable Sarcoma Uteri* ; (2.) *Fibroma Uteri*.

Dr. H. T. BYFORD : These two specimens may be shown together, as the history is not so important as the method of operating. One is probably a sarcoma, the other a fibroma of the uterus. One was removed yesterday, the other to-day. This patient with the sarcoma was somewhere near the menopause. She was rather thin, had a soft pulse, the menses were diminished in quantity, and the tumour was growing rapidly and causing pain. The blood vessels beside the uterus were exceedingly large, showing great activity and vitality. She had had this trouble for four years.

Dr. DUDLEY : Do you feel sure of the diagnosis of sarcoma ?

Dr. BYFORD : Yes I feel quite sure, but could not swear to it without an examination with the microscope. I base my diagnosis upon the appearance of the tumour when I came

down upon it, the immense vascularity, the absence of a capsule (or, rather, the fusion of the capsule with the tumour), and the way the bladder was grown to it. The fact is, I left most of the muscular tissue of the bladder at the point of attachment on the tumour—the bladder seemed almost a part of it. However, I only got the specimen to-day, and shall be very glad to have the pathologist make an examination. There are certain clinical facts that make me feel quite certain that some tumours are sarcomata and others fibromata.

This other case is a small fibroid, and Dr. Jaggard will probably question the propriety of its removal. My reasons for removing it were the following :—The patient was twenty-five years old ; had been married eleven years. Ten years ago a prominent gynæcologist in New York diagnosed pelvic inflammation and pyo-salpinx, and treated her accordingly. I saw her a year ago, and found the appendages enlarged and adherent in the posterior part of the pelvis. I was not certain but that this tumour was merely the appendages or an old hæmatocele to which everything had been glued. She was so tympanitic that it was impossible for me to make a satisfactory bimanual examination. I operated more from a symptomatic standpoint. The patient had been taking a good deal of liquor and opiates lately, was excessively nervous, and expressed herself as losing ground.

Coming down upon the tumour, I saw, of course, what it was. I could not get at the appendages, so I lifted it out and found them adherent and inflamed. In getting them out the posterior surfaces of both broad ligaments were pretty well disorganised, and the right broad ligament was one connective tissue cavity. I could not take them out and leave the parts in good condition, so I took the whole thing out.

This makes six cases on which I have operated in this way, all recovering. It is a method, I think, that has not been tried by any one else. The operation is simply this :—The broad ligaments are tied off, the uterus amputated below the tumour, and the stump is sewed up somewhat after Schroeder's method, but with catgut and silkworm-gut stitches. The

bladder is separated, an opening made down into the vagina in the anterior fornix just against the cervix. The silkworm-gut sutures, left long, are used for traction, and the cervix is drawn down and forward into the vagina and a clamp put on from the vagina. I have usually held the stump loosely with clamps, that the apposed surfaces might heal up somewhat, as after trachelorrhaphy. But as in all cases but the second one the edges sloughed, I now prefer ligating rapidly with silk and clamping firmly with my hollow clamp, so that the slough will separate early and come off in the clamp. The clamp prevents the contact of the slough with the patient's parts, and avoids septic trouble.

After I turn the stump down I sew the peritoneum from behind the bladder to the posterior wall of the cervix. There is no raw surface left for extensive adhesive inflammation in the pelvis, with its consequent peritonitis and obstruction of the bowels. I have used drainage above in all of these cases but one, because I do not usually operate on simple fibroids, there being generally some development in the broad ligament and some little oozing surface left. I do not drain below. When I put on the clamp from below I put a finger from above in the *cul-de-sac* of Douglas behind the cervix and a thumb in front of it, then push a pair of hæmodynamic forceps up from the vagina through the anterior fornix between my thumb and the cervix, and enlarge the rent by scissors-snipping and stretching.

Dr. C. T. PARKES: I want to say a word or two about Dr. Byford's specimens. I hope the doctor will not think I am making any adverse criticism; I only desire to express my opinion, because it has been with me a very difficult matter to come anywhere near deciding the character of a tumour of this nature in the uterus, as to whether it is a simple myoma or whether it possesses some of the characteristics of the sarcoma. I think the usual characteristic of a sarcoma is that it does possess a capsule. I should consider the cavity in this tumour, from merely looking at it, as a simple degeneration of myomatous tissue from want of nourishment.



I think the kidney specimen is very interesting, and unusual in the fact that a suppurating kidney should have existed this length of time without any further increase in size and without following the usual disposition of these troubles towards external manifestation of suppuration. The only explanation that appears in this case is the fact of the peculiar enlargement of the ureter, which enabled it to discharge the accumulated matter in the pelvis of the kidney into the bladder. Usually in suppurating kidney almost the first manifestation we have is the formation of a tumour and the development of a perinephritic abscess, which opens externally. Surgeons have always found difficulty in the treatment of these cases, on account of the presence of cicatricial tissue formed in the surrounding tissues, preventing the easy removal of the organ. So far as general surgery is concerned, it is almost a rule that suppurating kidneys should not be removed, and this rule is sustained by the results in many cases. But this case is very fortunate in the fact that it had no surrounding complications; all the trouble was inside the kidney, and could be attacked without any such difficulties as usually arise. It is an interesting subject to me, because I have had quite a number of these cases of suppurating kidney in which the trouble had gone on to perforation of the capsule of the kidney and the formation of a perinephritic abscess and degeneration of the tissues about it; but I have always dreaded to remove them, on account of the complications arising from the presence of adhesions and the danger of septic trouble, but have adopted the plan of laying them widely open, which is not very satisfactory, as the patient goes on to apparent recovery, but will return again owing to the many pockets in which pus accumulates. The question is, What is the best procedure? It is a serious matter to remove a kidney, especially a suppurating one. The other kidney does not always perform its function, for a time, at least. The idea of continuous irrigation has suggested itself to me in these cases. Whether it can be put in force and applied as in other cavities is a question I should like to see settled some time.

Dr. MARTIN: I had the pleasure of witnessing a couple of these operations by Dr. Byford with this method of treating the stump, and it seems to me that it is of sufficient interest to at least receive comment and commendation. The only objection that I can offer to the operation performed by Dr. Byford is that for a nervous, rapid operator the procedure is altogether too long. Dr. Byford spends from two and a half to three hours in performing this operation, and while the abdominal cavity is perfect after the stump is secured, and it is a case that you will pronounce a success almost from the beginning, at the same time it is very tedious, and a great many operators, even good ones, would object to doing it on that account. It seems to me that this method of treating the pedicle is an advantage over the fixation of the stump in the abdominal wall by means of clamps, inasmuch as it does not interfere in the slightest with the bladder, and it does not afterwards leave an ugly, depressed cicatrix. That point is certainly of value, especially the pressure upon the bladder. When the stump is turned down, there seems to be no more pressure upon the bladder than if the cervix had been amputated at the internal os and left projecting into the abdominal cavity.

Dr. W. W. JAGGARD: Dr. Byford alludes to a criticism I felt called upon to make some evenings ago when he presented a uterus removed by vaginal hysterectomy. The operation was well done, and was a success in so far as the patient recovered. The criticism I made was that there was absolutely no reason for the removal of that uterus. There were two or three small foci of myomatous tissue, not one of them bigger than the terminal phalanx of your little finger. As I remember, the alleged indication for the operation was the fear, first, that these foci might undergo malignant change, and, second, dysmenorrhœa. But the woman was very near the menopause—forty-five years old, I think. The other point in the indication was the fear that this myomatous tissue would undergo a malignant change. Such a case ought not to go on record without some vigorous protest.

Dr. BYFORD: I would like to say a word with regard to Dr. Martin's remarks. I think he extends the time a little from what it usually takes. The reason why it has taken so long in most cases is because it is a new procedure; I hardly knew in any case when I started that I was going to finish by this method. Ligation and clamping of the stump will save much time in the future. Another thing is the complications; I was one time half an hour getting this tumour out on account of adhesions below.

In regard to the capsule, I did not mean to say that sarcomata have no capsule; I mean that their capsules are adherent, and cannot usually be separated from the tumour without excessive hæmorrhage.

As to the kidney, of course I understand the danger of removing a suppurating kidney. My operation was exploratory at first. I opened into the abdominal cavity, examined the other kidney and found it normal in shape, size, and surroundings. I think it is what we ought to do with all suppurating kidneys—remove them before the pus has penetrated the capsule. This patient has no constitutional symptoms of tuberculosis, nor any trouble that would denote general infection from any disease.

In regard to the case Dr. Jaggard referred to, I would state that I can hardly agree with him as to the size or condition of the largest of the myomatous masses.

After-Treatment of Laparotomy. By Dr. T. J. WATKINS.

Dr. JAGGARD: I was very much interested in the paper, and particularly in the allusion to ether as a renal irritant, and the reader's reference to the fact that he had observed two cases in which ether was responsible for fatal nephritis. I believe that is one of Emmet's notions. The evidence upon which the notion is based, however, has never been adequately stated. Dr. Weir, of New York, has published a very interesting paper upon his observations of the effect of ether upon the kidneys, and the result goes to show that

ether employed as an anæsthetic is not a renal irritant. In no one case has he been able to establish the fact that ether produces any irritation of the kidney above that of any extremely volatile substance. It would be interesting if the reader of the paper would give the evidence upon which he bases his conclusion that ether was responsible for the two cases of fatal nephritis. Can he exclude septic infection? I have had some experience with ether in puerperal convulsions. Emmet once said ether was strongly contra-indicated under these circumstances, on account of the danger of increasing the congestion. Upon observation of quite a number of cases I have never seen any adverse influence. As regards the hypodermic injections of ether in shock following severe operation, hypodermic injections of ether will create no result whatever, provided the needle is sterile and the skin is sterile. Ether does not come in the group of reagents that cause tissue reaction, of which turpentine and croton oil are examples. The value of ether may be questioned when it is given as a stimulant when the patient's blood is already saturated. When chloroform is used it is unquestionably one of the best diffusible stimulants.

In regard to the length of time the patient should rest in bed after laparotomy, this point was brought very unpleasantly to my attention about a year ago. I had been nursing along my few laparotomies, some ten, trying to get up to a hundred without a death. The case was a difficult one for me—bilateral hæmato-salpinx, a tumour on each side about as big as a goose egg, with universal adhesions. I had a good deal of difficulty in getting at the tumours, ligating them, and securing a clean pelvic cavity, but finally accomplished this, and the first two weeks of the patient's convalescence were perfectly afebrile, with no complications whatever. At the end of two weeks the husband, a physician and a friend of mine, wished to remove his wife from the hospital, and the house physician, without asking my consent, gave him permission to take her home. She travelled about five miles in a carriage, worked around the house for a day, and perished a week later

of a furious peritonitis. No autopsy was allowed. But the course of her convalescence in the hospital, the fact that all the bodily functions were normal, the urine perfectly normal, led me to think there was some relation between getting up out of bed at the end of the second week and taking this drive, and the peritonitis. I remember when I was with Dr. Goodell in the University Hospital a case gave us a good deal of trouble, in which a woman got up at the end of eighteen days and went from Philadelphia to Pottsville; during the ride home the abdominal incision opened from above the umbilicus to the pubes and some of the intestines protruded, but fortunately when she got home a physician stitched up the wound, and she made an excellent recovery.

Dr. PARKES: Mr. Chairman, I do not know that I have anything to say, simply because the paper leaves nothing open for discussion. It is such an admirable paper in every way that I do not think anyone can find fault with it. I can see very plainly that the many points of interest that have been mentioned in this paper will come under the surgeon's notice at one time or another if he sees many patients. So far as the rule for treatment of patients under my charge is concerned, I must say that individually I give them very little, because I believe that if the patient has been prepared before the operation, no after-treatment is required. Within the last two weeks I have done four laparotomies, some of them of moderate severity and some quite severe in character. Those patients are all well; none of them have had complications of any kind, no discomfort of any kind, and have required no medication with the exception of a carthartic. I think this arises, however, from the care which the surgeon adopts with reference to the patient both before and during the operation. The rule with me has been, in reference to temperature, not to place any more reliance upon it than upon any other symptom. The thermometer will frequently give a temperature astonishing to the nurse, and perhaps to the interne who is not accustomed to these cases; and you see the patient, and take into consideration all the symptoms pre-

sented, and pay no attention to it. A temperature of 104° , for instance, will not infrequently come from constipated bowels or accumulation of gas, so I cannot say I have any rule with reference to that; if a temperature precedes and is accompanied with other symptoms, exhaustion or malaise or headache, showing that there is some difficulty, I should accord my support to the suggestion of attempting to control that condition by the use entirely of sponging. I do not believe in the administration of any antipyretics. I believe that they are just putting on the patient an increased burden, to get rid of a poison which has to be eliminated in addition to the poisons of the disease. So far as my experience goes, the application of cold to exposed parts of the body has been sufficient to secure a falling temperature, if the trouble has not depended upon serious septic infection. I believe these cases of severe septic infection, if they do get well, scarcely ever do so because of the doctor, but by the grace of God. The most of them are better left alone rather than to have active interference further than continued stimulation with whiskey and milk, as my friend Dr. Wright once said; I believe in that in this condition as well as septic conditions from other causes. What will be the result of operative interference in cases of septic peritonitis is to be proven by further observation. It seems to be the general impression of the profession that such interference is justifiable in all cases of septic peritonitis.

Dr. E. C. DUDLEY: Mr. President, Gentlemen,—About fifteen years ago I was an interne in the Women's Hospital of the State of New York, and in that capacity I had to attend to the after-treatment of laparotomies which were performed in that institution. They were done mostly by Thomas and Emmet and Peaslee; but I desire to contrast the treatment which was then in vogue with the treatment which is apparently now in vogue, as shown by the essayist, who only recently, as an interne in the same institution, has been looking after the treatment of patients of practically the same operators. In my time any patient presenting herself for abdominal section was subjected for a week to a very

careful diet, mostly liquid, which usually resulted in loss of strength, to counteract which she was given five or ten grains of quinine two or three times a day; and to prepare the nervous organization for the shock of the operation she was usually given pretty large doses of opium. After the operation had been performed, the quinine and opium in large quantities were kept up, the opium often to the extent of sending the respiration down to seven or eight a minute. That was done as a preventive measure, in order to get rid of the peritonitis which was supposed to threaten all of these cases. I do not know what the proportion of deaths was but it was enormous. Many doubtless died in consequence of the preparatory and after-treatment, and many others died from the fact that the operator did not take as much care of what he put in the abdominal cavity, as he did of what he took out. Now that clean surgery is the order of the day, much of this complicated preparatory and after-treatment has disappeared; indeed, most patients get through without any after-treatment at all beyond the mere administration of a cathartic or some other medicine, such as an individual would take in ordinary health. This paper goes into the details in a very admirable way; it is timely and valuable because cases do arise in which the after-treatment is necessary, but in this whole subject the times have changed and we have changed with them.

The author mentioned a certain enema of glycerin and sulphate of magnesium and water—about an ounce and a half of each. If I am not mistaken, this is a peculiar treatment which Dr. Watkins has used a great deal. I have adopted it with a great deal of satisfaction for the relief of distension. There is another enema of which I learned in Birmingham and Edinburgh, which is the regulation enema in Scotland and England—that is, the so-called turpentine enema, which is composed of about a pint of very stiff soapsuds to which have been added one or two drachms of spirits of turpentine. This is an excellent agent for cleaning out accumulations of gas in the bowels. I have used in the

soapsuds strong beef tea instead of water, because a certain portion will be retained, and, being beef tea, will serve as nourishment for the patient. Dr. Keith, in Edinburgh, once told me that he always looked for the passage of flatus with a great deal of interest, and he always felt pretty sure that once the flatus passed the patient was safe.

As to the drainage tube, I use one no larger than a lead pencil; it fulfils the indications perfectly, and leaves a small opening to heal. Like a previous speaker, my first ten cases of laparotomy had all recovered, and I was working my way gradually up to a hundred without a death, when I had a patient in a hospital who, without my knowledge or consent, was removed from one room to another, and in the night, while the watch was away, she paid a visit to another patient, who gave her some hard boiled eggs and Limburger cheese. This was on the 15th, and on the 17th she died, and the diagnosis was garbage on the intestines.

Dr. BYFORD: Mr. President,—The paper was so complete, and confines itself so well to the subject, that it is hard to criticise it in any way except to commend.

In regard to the after effects of ether, I have had a little experience in one way—that is, after long operation—and I have noticed that a patient who has been under ether two or three hours is not apt to vomit much. I think it is very much like giving a small and large dose of morphine; if you give some women one-sixth to one-fourth of a grain there will be nausea, but if you give them a large dose they will often go to sleep and sleep it off. Very often by giving a full narcotic dose when the patient is coming out of the ether we can prevent nausea. I have had some cases of most excessive vomiting cured by giving something to destroy the reflex sensibility, viz., about sixty to eighty grains of chloral per rectum in divided doses (twenty grains every two or three hours), or large hypodermics of morphia. I have not gotten any benefits from cathartics except in establishing the continuity, one might say, of peristaltic action. If the patient vomits and the bowels are in such a position that peristaltic action

does not go on properly, I think cathartics will very often give relief. Often when I see symptoms like that coming on, I give an 'enema of turpentine, glycerine, and water, and what seems like developing sepsis disappears.

In regard to taking out drainage tubes, I can hardly agree with the doctor. Local abscesses have occurred from removing the drainage tube too soon. When we put in a tube it is possible that the peritoneal cavity may not be shut off after twenty-four hours, or an accumulation of fluid near the drainage tube may be forced into it after two or three days. Nor can I agree with the principle of taking out the stitches in six days; I think it sometimes dangerous. I have two cases now in which the stitches have been left in two weeks, although I sometimes take half of them out in less time than that. I use silkworm gut. I have twice opened the abdominal cavity for septic inflammation and once for peritonitis. In each case the patient died promptly in a few hours, which led me to think the abdomen should be opened early, and that we should not wait until sepsis has fully developed. If we leave any extensive surfaces of denuded intestine, the use of cathartics is thought to limit adhesions; but I believe that wherever the peritoneum is abraded there will be adhesions anyhow, and in proportion to the injury. Cathartics cannot prevent them. I give myself no concern about adhesions alone, because I have seen all the intestines glued together from peritonitis and no trouble whatever result. But if viscera are glued together in such a way as to interfere with their function, there will be trouble. I do not think there is so much in preventing adhesions as in having these adhesions occur when the intestines are in a proper position to perform their function. For this purpose I give cathartics, and give them early, and after the bowels have moved keep them quiet.

Dr. H. D. NEWMAN: Mr. President,—The subject has been thoroughly discussed, and possibly I cannot say anything further of interest other than to give a few details as to the method used at St. Elizabeth Hospital. First, in regard

to the stomach. I am in the habit of giving lime water and milk in small but frequently repeated doses—say a teaspoonful to a tablespoonful as often as every two or three minutes—until larger quantities can be taken at long intervals. Given in this way, it is a valuable agent in allaying thirst, correcting acidity, checking vomiting, affording nutrition, and restoring the loss of fluids. For the latter purpose saline injections per rectum are more prompt in their action, and when indicated are frequently resorted to. Another method in use at the hospital is the rubber, or Esmarch's, bandage applied over the usual dressings. It allows of mobility of the abdomen and respiratory tract, and is a very great comfort to the patient when not applied too tight, but sufficiently so to afford some support. This device was first used by Dr. J. Frank at the Hospital, and I believe is deserving of special mention, inasmuch as it keeps up an admirable, uniform support and warmth of the parts—the latter often a relief to the usual abdominal distress, so that an opiate becomes unnecessary; and the former of great value, especially in those cases of severe retching and vomiting.

The iodoform wicking, I think, has advantages over the usual gauze for capillary drainage. The shreds, as you know, are continuous and not apt to be broken or interrupted like gauze; it can be passed into the ordinary glass or rubber drainage tube, as well as used to advantage after the removal of the tube.

In regard to the use of the catheter after laparotomies or any surgical procedure, I was pleased to hear the fact spoken of that one can, with a little patience, get along without the catheter in many instances, certainly to the great advantage of both patient and attendant. Usually the use of the catheter must be delegated to a nurse or an attendant, and unless great care is taken, both as to cleanliness and the use of the instrument, an irritability of the urethra, neck of the bladder, or possibly cystitis results, which is not only annoying to the physician, but entails suffering upon the patient, and leaving a trouble that is apt to be extremely tedious in its after-treatment.



In regard to the injections into the bowel referred to, there seems to be one valid objection to them—they are apt to create an intolerance on the part of the rectum, and where used early may prevent that which is of greater importance later on, the nourishment of the patient per rectum with whiskey, milk, &c.—our “sheet anchor” in after-failure from sepsis and other causes.

Dr. PARKES: I would like to say one word about ether. It has been the anæsthetic I have used universally in all cases of laparotomy. I think there is a great point in the manner of its administration and the inhaler that is used. I am surprised at the very small amount of ether required to keep a patient asleep by means of the ordinary hospital inhaler. It is a rule with me to advise the anæsthetiser not to keep the patient profoundly asleep, but to remove the ether occasionally and let the patient have as much air as possible and get along with as little ether as possible. The after-effects depend upon the peculiarities of the patient as to its influence upon vomiting. I cannot say that I have ever used any remedy that I have been satisfied was of great service in relieving vomiting. By mistake I once used a remedy that stopped persistent vomiting instantly. The patient was given a teaspoon of $2\frac{1}{2}$ per cent. carbolic acid. I am a very strong advocate of the non-use of the catheter. I do not think it ought to be used at all. I think it is a good idea in the preparatory treatment to teach the patient to use the bedpan. The greatest difficulty arises from not paying attention to that. I am quite sure the use of the catheter has annoyed many patients a good deal. I do not believe in keeping the patient absolutely quiet; I allow my patients to move about, and tell the nurse to move them. I do not think the wound itself nor any of the complications in the abdomen are disturbed to any harmful degree by the slight changes of position which give such comfort to the patient.

I am glad Dr. Jaggard raised the point of keeping the patient in bed for some time after the operation. I have had a similar experience to his, but not so bad in its results, still

one in which the patient was placed in danger by getting out of bed in the second week, and I have had patients in a very short time develop an attack of peritonitis from the same cause. I do not allow the patient to even assume a sitting position until the end of the third week, no matter how well she has done.

Let me say one word about after-treatment : I believe it is best for us to come to the conclusion that no after-treatment is required.

Dr. T. J. WATKINS, in closing the discussion, said : Mr. President,—With reference to the time of removal of the drainage tube, I still adhere to its early removal as suggested in my paper, for if a sufficient amount of fluid remain connected with the tube at the time of its removal to interfere with the recovery of the patient, it will well up through the sinus ; then by keeping the sinus patent just through the abdominal wall, it will heal in a most scientific and satisfactory manner. If the fluid be not connected with the sinus, allowing the tube to remain *in situ* will do no good, but will produce constant irritation.

I have often removed the drainage tube earlier than I thought wise, but as I had observed in a number of cases that sinuses followed the prolonged use of the tube, I took the chances, and in none of these cases did the wound do badly. To allow a sinus, not connected with a suppurating sac, to heal from the bottom by frequent shortening of the tube, seems to me absurd, for the walls of the sinus are so contractile that the sinus will readily close unless prevented. It is necessary, then, to keep the sinus open only just through the abdominal wall, and for a short time.

The time of removal of the stitches is, I think, a matter of rather slight importance ; if the wound does well there is no reason why the stitches should not remain *in situ* more than one week, if desirable ; but if the incision be short and the union perfect, there is no reason why the stitches should not be removed at the end of a week.

I am unable to see any reason for the opinion expressed

that etherization does not produce nephritic congestion. No one doubts that ether is eliminated by the kidneys, and that when given in small amounts it has an active diuretic effect. It is, moreover, a therapeutic fact that all active diuretics, when given in excess, produce nephritic congestion. Scanty secretion of urine, pain in the region of the kidneys, nausea and cephalalgia not infrequently follow etherization, and these symptoms are usually relieved by increasing the functional activity of the kidneys.

The danger from hypodermics of ether is not septic infection, but local paralysis.

The cases cited by Drs. Parkes and Jaggard, in which too early getting up after laparotomy proved fatal, present many points of interest. A number of cases are on record in which, after the patient has done well for one, two, or three weeks following laparotomy, peritonitis and septicæmia have suddenly developed with a fatal result. In such cases the autopsy has usually demonstrated that death was due to the rupture of a pus sac. In the cases cited it might be interesting to inquire first: Were they not of this nature? and second: How would the patients have done had they remained longer in bed?

In the matter of abdominal support I consider the device of Dr. Newman as practicable and worthy of thorough trial. I think, however, that the use of an abdominal supporter for many weeks or months after laparotomy is bad practice, as it causes atrophy of the abdominal muscles and thus increases the liability to hernia. The late Dr. James B. Hunter was one of the first to abandon the abdominal supporter. As soon as the wound was healed he gave the abdominal walls the rough massage, and in none of his cases, as far as I know, did the distressing feeling of weakness of the abdominal walls, so commonly noticed after the prolonged use of the supporter, occur, or hernia result.

I think the question of the kind of ether inhaler to be used is most important. The Clover inhaler is theoretically bad, but practically it works well. When properly used, not more

than two ounces of ether are necessary for the first hour, and frequently one ounce suffices for an operation. The liability to vomiting is much lessened when little ether is used, and necessarily congestion of the kidneys and air passages is much less frequent.

I thank the Fellows of the Society for their kind attention to, and discussion of, the paper.

NORTH AMERICAN PRACTITIONER.

Three Peritoneal Sections performed upon the same Patient within Nine Months; Vaginal Section, Ventral Section and Inguinal Section. By HENRY T. BYFORD, M.D., Professor of Diseases of Women, Post-graduate Medical School; Gynæcologist to St. Luke's Hospital; Surgeon to the Woman's Hospital of Chicago.

I have thought this case interesting because of the number of peritoneal sections performed upon the same person, because it included the first removal of an ovary from within the pelvic cavity by way of the inguinal canal,¹ and from its illustration of the characteristic results of too much conservatism.

The patient, Sophie N——, a servant twenty-eight years old, was admitted to St. Luke's Hospital May 14, 1888, and received local treatment for an enlarged right ovary and retroversion of uterus, with a temperature constantly above 99°F., even when she was kept in bed for two weeks. Uterus could not be kept in position by a pessary. On account of the continued pain and desire of the patient to become able to again work for her living, I consented to remove the enlarged ovary. This I did by vaginal section August 15th, 1888. The left ovary was drawn down in sight and, appearing healthy, was not taken out. After closing the vaginal incision I introduced a stem into the flabby

¹ All other inguinal oöphorectomies have been, as far as I know, for ovaries within or at the entrance of the inguinal canal.

uterus, and tamponed it in position with iodoform-gauze. The patient made a good recovery, but the uterus again became retroverted when the patient got up from her bed. The temperature became normal, but the backache, and particularly the pain in the left side, was still so severe upon any attempt at active exercise, that, after several months' treatment at the dispensary, the patient returned to have the other ovary removed. Her general health was becoming more impaired, and her mental condition one of anxiety and despondency.

I opened the abdomen over the symphysis January 9, 1889, before the regular clinical class of St. Luke's Hospital,¹ examined the left ovary again by sight and touch, and, finding it healthy, dropped it back into the abdominal cavity. I pulled up the old stump, from which the ligatures (braided silk. No. 10) had become absorbed, and stitched it to the peritoneum and fascia, to the right of the supra pubic region, by one fine silk suture. I then introduced a thread through the left broad ligament near the uterus, so as to include the round ligament, and sutured this part to the peritoneum on the left side, using only one stitch. Patient recovered without a bad symptom, except that the temperature went to 100° F. three weeks later, at her first subsequent menstrual period. When, at the end of four weeks, she was allowed to get up, she still complained of her back. As the cervix as well as the fundus was forward I introduced one of my barrier pessaries to hold the cervix back, and turned her over to the outdoor department for local treatment.

In about three months she returned with her left side worse than ever. She had tried to work, but was unable to do so, and now demanded that all of her pelvic organs be taken out. Local treatment had failed to help her.

By examination I found the uterus still hung up behind the pubes, and the left ovary very tender and drawn forward so as to lie behind the inguinal canal.

¹ *North American Practitioner*, February, 1889.

Accordingly, on the 13th of May, 1889, in the presence of the post-graduate class, I cut down upon the left external inguinal ring, opened the canal a short distance, cut through its posterior wall into the peritoneal cavity, and came directly upon the ovary. I was able with forceps to draw forth the ovary through an opening in the peritoneum that would not freely admit two fingers. The broad ligament was very firmly attached to the peritoneum anteriorly, just as it had been sewed, but the ovary was now enlarged and adherent to the posterior surface of the broad ligament. The tube was adherent to the abdominal wall and to the omentum. I ligated the tube and ovarian ligament and their vessels with one thread, and the infundibulo-pelvic ligament and ovarian artery with another. I then put a temporary clamp upon the pedicle, cut off the ovary and tube, and sewed up the edges of the unligated middle portion of the broad ligament with fine silk. The pedicle was thus flat and over an inch wide, and traction of the infundibulo-pelvic portion of the pedicle upon the uterus avoided. The patient recovered promptly, with only one bad symptom, viz.: suppuration of the drainage hole, lasting five months (although the discharge was slight after the first month) before finally closing. I attributed this to the abundant and loose character of the fatty connective tissue in front of and under the paravesical pouch, and would counsel any one who may enter the peritoneal cavity by this route, to work a little upwards as he goes through the posterior wall of the inguinal canal—for fear of getting under instead of into the pouch.

By way of criticism I may say that it would have been better to have removed both ovaries at the first operation, viz., the vaginal section. The displacement could then probably have been cured, as it has been in other cases of mine, by being tamponed into position until the exudates and adhesions about both stumps and the recto-uterine pouch had formed. But I believed, and still believe, that the left ovary would not have become diseased through the first operation. Hence my conservatism seems not entirely un-

justifiable, particularly as she was rather an attractive-looking girl and might have had a chance to marry and bear children. The cause of the disease of the remaining ovary was the stitching of the sound side to the abdominal walls, an observation which has led me to suspect that the broad ligament structures should not be sutured unless the ovary be at the same time removed. It were better, I think, either to remove the ovaries or else pass the thread through the uterine wall. In case only one ovary were removed, it would usually be sufficient for a case of retroversion to suture the side of the stump only. Either Alexander's operation or posterior fixation by suturing the sacro-uterine ligament is preferable to stitching the sound side. As to the unjustifiability of opening the abdominal cavity so often in one patient, we have come to a point in which we can say that it is about as safe to open the abdominal cavity as to open deep into cellular tissue. The danger lies not so much in opening the cavity as in the diseased condition we find and interfere with. Exploration, hysterorrhaphy and the removal of ovaries without adhesions or development into tumours, give very slight mortalities in the hands of the expert, and will soon be, in fact are now, performed in cases in which life is not at stake.

As to this particular case, operations upon the peritoneum did not seem to affect the patient any more seriously than minor operations do the majority of patients. She is completely cured of her symptoms, and is content to retain the rest of her organs.

AMERICAN JOURNAL OF OBSTETRICS, 1890.

*The Treatment of Posterior Displacements of the Uterus.*¹

By H. J. BOLDT, M.D. (New York).

It is evident to all that posterior displacements require as much variation in treatment as there are complications with, and causes for, the faulty position ; but the time is too limited

¹ Read before the New York Obstetrical Society, March 18th, 1890.

to enter into the details of the subject. I wish to invite your attention to some of the conditions in which surgical measures must be adopted in order to secure a successful result. Although the object in view is alike in all cases, viz., to place and keep the uterus anterior, the particular procedure must necessarily differ with individual patients and conditions.

It is generally admitted that displacements, as such, produce none but mechanical symptoms. The various pains and aches, or reflex phenomena, of which such patients complain, are caused by the pathological conditions which complicate the malposition.

In an excellent paper read before the American Gynæcological Society at its last session, Dr. Wm. M. Polk dealt with a similar subject; it will hence be needless for me to take up the time with methods considered by him.

It is, of course, obvious that defects existing in the pelvic floor must invariably be remedied if we expect our treatment, whether ambulatory or surgical, to be successful.

I take the standpoint that all surgical interference must be limited to selected cases; should operation be necessary, one which utilizes the already existing supports of the uterus ought generally to be chosen. The latest of these procedures is that introduced by Frommel,¹ who utilizes the posterior suspensory ligaments as follows. The abdominal section is made in Trendelenburg's posture, and, after separating the adhesions and holding the uterus well forward, the posterior peritoneal reflexions are surrounded with a suture near their uterine insertion and fastened to the lateral pelvic peritoneum. The effect is that instead of the bands going more or less in a straight direction towards the rectum, they are caused to deviate at a right angle, thus practically shortening them and throwing the body forward. In the case reported the operation was not successful, the failure being due, according to the operator, to the suture material used. Another and seemingly an excellent method recently carried out by our fellow-

¹ See *Centralblatt für Gynäkologie*, No. 6, 1890.

member, Dr. Dudley, is the one to which he has applied the term "uterine desmopcynosis." Through his courtesy, the privilege of examining his patient was extended to me, and the result that I found at that time was all that could be desired.

The main steps in this operation are the denudation of the anterior surface of the uterus and the broad ligaments, which latter are stitched to the raw uterine surface, thus shortening the lateral suspension bands and thickening the anterior uterine wall, making it also a trifle heavier in weight. The round ligaments are now shortened and given a lower attachment by folding them in; they are also sewn to the anterior surface of the uterus.

A third new method is that adopted by Kelly, who attaches the ovarian ligaments to the parietal peritoneum. The three cases so operated upon by him have done well, the uterus being thrown into as near a physiological position as it is possible to accomplish with any operation. (See *The Johns Hopkins Hospital Bulletin*, No. 2.)

The great majority of fixations can, however, be freed by manual manipulation, according to the method of either Schultze or Brandt, with the latter of which I have dealt at some length on a previous occasion.¹ Two of the surgical methods adopted by me, upon which I will take the liberty to report, are ventral *suspension* and ventral *fixation*. By suspension is meant the approximation of the uterus to the parietal peritoneum by means of one or more sutures; whereas in fixation the uterine serosa is in addition scraped off to a limited extent from the anterior surface of the fundus, thus absolutely necessitating fixation by adhesions. If the respective case is such as to promise a good ultimate result by suspension, then this is as good as any direct method known to me, because it is very simple and done in less time than any other operation, which is of considerable importance in some cases, and the adhesions, if any form at all to the

¹ *American Journal of Obstetrics*, vol. xxii., p. 579.

parietal peritoneum, are so slight that should pregnancy ensue in the future it will not be interfered with by them. This is evident from the technique of the operation—viz. : after breaking up the adhesions, which I have seen so dense that the use of ligature and scissors was required to sever them, a silkworm-gut suture is threaded in a coarse needle for the parietes ; after these have been pierced, a fine curved needle without cutting edges is exchanged for the coarse needle, and the suture passed beneath the uterine serosa at the fundus, taking in about one inch of surface ; then the exchange is again made for the coarse needle, and the opposite parietal wall pierced. The rest of the sutures to close the abdominal incision are placed *in situ*, and a sponge on a handle is introduced into the *cul-de-sac* to ascertain the amount of bleeding from the torn adhesions ; we must also make sure that there are no intestines in front of the uterus. Everything being in order, the suspending suture is tied, and then the rest of the abdominal incision closed. The smallest pessary suitable for the respective case should at once be inserted to take off the strain of the uterus on the suture. The supporter must be worn for a variable period of time. After the lapse of one week the silkworm suture is cut, to prevent burying into the integuments, but it is not entirely removed for two weeks.

The indications for this particular operation are : when the uterus is fixed so firmly that local treatment is of no avail, or when we have reason to believe that such a form of tubal or ovarian disease co-exists with the malposition that manual treatment is contra-indicated. If, on opening the abdomen under such circumstances, we find that the disease of the adnexa is not suppurative, a hydro- or hemato-salpinx, the appendages should not be indiscriminately removed just because the patient complained of pains referable to the tubes or ovaries, for the reason that probably, when the perimetritic adhesions which hold the uterus in its pathological position are broken up and the adnexa are freed, these organs will eventually be restored to a normal condition, either with or

without subsequent treatment. I have had the good fortune to prove this to my own satisfaction, as will be seen from the cases to be narrated. Suspension is, however, not applicable to cases in which we have a flexion angle atrophied to any marked degree, or when the natural supports are relaxed and atrophied to such an extent that their subsequent physiological usefulness cannot be relied upon, so that the organ would probably subsequently fall back again, with eventually a formation of fresh perimetritic adhesions and the old trouble renewed. In that class of cases the operator must judge which of the various operations already practised would be the most rational. I do not see any practical objection to the denudation of the uterine serosa to the extent of 1.5 to 2 square centimetres and making a *fixation* with two or three sutures. For illustration, barring my own observation of pregnancy after this treatment, I refer you to the cases of recurring pregnancy after Cesarean section, when we almost invariably have adhesions to the anterior wall; a marked example of which is mentioned by Dr. Howard Kelly in the case of Mrs. Reybold in the March number of the *American Journal of Obstetrics* of this year. Yet it is but proper to limit this procedure, until more is known as to the ultimate condition of patients so operated upon, to those cases where the appendages have been removed, or where the likelihood does not exist of future impregnation. A ventral fixation of some kind should always accompany double ovariectomies or salpingectomies when the uterus is posterior, else I should not consider the operation complete.

As will be seen from the cases treated by ventral fixation and suspension, we have every reason to give this mode a favourable consideration, despite the fact that the non-pregnant uterus belongs in the pelvic and not in the abdominal cavity.

My first case was done on March 17th, 1887. The patient was thirty-four years old, and had been suffering intensely for two years, the illness following an attack of general peritonitis for which no cause could be found except "a cold." The

tubes and ovaries were enlarged, very sensitive and adherent. The uterus was held posterior by a broad, short, and very thick adhesion which required the use of scissors. After separating all the adhesions a silver-wire suture was used to suspend the uterus. The pessary which was placed *in situ* immediately after closing the abdominal wound was worn only three months. The result is satisfactory in every respect: the former ovarian pains, excruciating dysmenorrhœa, &c., have entirely disappeared; the uterus is anterior and freely moveable. Examined in my clinic on March 19th: uterus is still in good position, and she feels perfectly well.

CASE II.—E. C. had had salpingotomy and ovariectomy performed on previous occasions. On March 5th, 1888, the abdomen was opened a third time to relieve her of the distressing pain caused by an adherent, retroflexed uterus. Ventral fixation was difficult; the hæmorrhage so profuse as to require an intra-abdominal tampon of iodoform gauze for twenty-four hours, and a vaginal packing as counterpressure to control it. Patient was lost sight of after a few months, but when last seen the uterus was anterior.

CASE III.—C. S., forty-eight, single, domestic. Patient had been unable for a long time to attend to any work on account of intense suffering, consisting of backache, pain in both ovarian and hypogastric regions and in the thighs. The uterus was bound firmly posterior, and both ovaries enlarged, cystic, and adherent. Operation April 23rd, 1888. The adhesions were broken up and the uterus suspended. Discharged from the hospital five weeks subsequently. Uterus anterior. Patient feels much easier, although not quite free from pain in the ovarian regions. Other pains have entirely subsided. Seven months after operation she is entirely well.

CASE IV.—B. H., thirty-eight, multipara. Had similar symptoms, but in addition epilepsy and at times psychical disturbance. The examination revealed a condition similar to the previous case. The operation by suspension was done on May 7th, 1888, and was successful as regards keeping the

uterus anterior for the length of time that the patient could be observed, *i.e.*, two months. The psychical disturbance and ovarian pains were not relieved. She died subsequently, as near as I could learn, of some form of insanity.

CASE V.—M. N., æt. twenty-nine. Operated May 28th, 1889, by ventral *suspension*. The symptoms and condition were much the same as in Case III. Seen six months later, and the uterus was still in normal position. She was relieved of all except the symptoms produced by an oöphoritis, on the left side, of moderate severity. A note in my history book states that she was also seen and examined by Dr. C. C. Lee, who corroborated the physical condition. I was informed by a relative a few weeks ago that the patient is perfectly well now, and able to attend to her duties as a domestic, which she could not do prior to the operation.

CASE VI.—A. S., operated on January 25th, 1889; twenty-six years old; married one year; had one child four months previous, since which time she has been suffering unbearable pain in the lumbar region, thighs and abdomen. Had chills and fever. The uterus was firmly adherent posteriorly, and a fulness existed on either side. The abdomen was opened in the expectation of finding puerperal suppurative salpingitis as a complication. Though the adnexa were enlarged and adherent, it was not considered that the acute salpingitis required treatment by salpingotomy. The perimetritic adhesions of the uterus and appendages were broken up, and the uterus attached to the anterior abdominal wall after denuding the serosa for fully a square inch. The patient on the third day developed a severe croupous pneumonia, but eventually made a good recovery. When seen six months later the uterus was anterior, positively adherent to the parietal peritoneum, and her condition was excellent in every respect. When last seen, quite recently, she was four months pregnant, without the slightest inconvenience, and her health and physical condition all that could be desired. The uterine serosa was scraped off to see what effect pregnancy would produce should it occur.

CASE VII.—Operated June 3rd, 1889. C. E., æt. thirty-three, widow; one child sixteen years ago. Patient had suffered constant misery since the birth of the child, and had during that time been in the care of a number of physicians without benefit. She was also treated by me with pelvic massage, electricity, &c., without producing any change for the better, as regards her own feelings. The uterus was firmly glued down by broad adhesions, both ovaries and tubes tightly adherent and enlarged, exceedingly tender to touch. Ventral fixation after denudation of the serosa. Seen by me yesterday: the uterus is in good position; on account of her avocation, which requires constant physical exertion by standing or walking, she at times experienced a dragging sensation, which is, however, completely relieved by the use of a pessary; menstruation and bowels are regular and absolutely free from pain—which had not been the case since the beginning of her illness. She is now perfectly well and a picture of health compared to her former physical condition.

CASE VIII.—A. C., widow, thirty years old; four children, the last born four years ago. Suffered from a long train of symptoms due to the complications of a retroflexion. Uterus enlarged but mobile. An extensive laceration of the cervix. Could not wear a pessary of any kind, the body tipping over the upper bar. Operation June 9th, 1889. First repaired the lacerated cervix, then attempted to shorten the round ligaments. The ligament operated upon broke off in the inguinal canal, and I could not have reached it again without opening the peritoneal cavity. Fearing that the same thinness of the ligament might exist on the other side, I preferred to make a median incision and attach the uterus by ventral suspension. The uterus was anterior at the time when the patient left the hospital, but I have unfortunately been unable to trace her for the purpose of ascertaining her present condition.

CASE IX.—A. L., æt. thirty-two years, widow; two children; no abortion or miscarriage. Last child was born six years ago. Menstruation began at fifteen, and up to the time of her

present illness she had always been regular, every four weeks, the flow lasting four days. No dysmenorrhea. Bowels were regular. No bladder symptoms. Her illness dates back four years, and consists of constant pain in the left ovarian region and backache, so intense that she is unable to do any work. In addition, frequent "bearing pains" in the hypogastric region are a distressing accompaniment. Frontal headache is without intermission, but more severe at times. Menstruation is irregular, occurring at intervals of from two to three weeks, and lasting two to three days, but a large quantity of blood is lost during the period. Very intense dysmenorrhea. Bowels are constipated. Status in March, 1889: Perineum lacerated. Vagina unusually flaccid. The anterior wall, with a cystocele, protrudes from the vulva. Rectocele. Uterus descended, retroflexed with version, but broad and firm adhesions hold the organ in its pathological position, so that it cannot be brought anterior, although slightly movable. The right tube and ovary are much enlarged, very sensitive, low down, and adherent. The left adnexa is sensitive to touch, but not markedly enlarged. Operation June 28th, 1889. Ventral fixation and repair of defects in pelvic floor. In doing the hysterorrhaphy the needle broke off in the substance of the uterus and buried itself so deep that it could not have been extracted without considerable cutting; it was therefore left in, and has not caused the slightest trouble. The uterus is anterior and mobile, though the attachment to the parietal peritoneum is readily appreciated. There is a little tenderness still in the right ovarian region, on *deep* pressure, yet practically the formerly intensely inflamed appendage has assumed a normal condition. As regards the descensus vaginæ with cystocele, it is also cured. She is now equally as free from discomfort as Case VII., and does her duties as domestic without the slightest inconvenience.

CASE X.—Mrs. S., æt. thirty-two; IIpara, and one abortion at the third month. Her illness dates back two years. The symptoms and physical condition are similar to those in the previous case; the result from operation, which was done on June 25th, 1889, is the same as in the latter case.

I am satisfied, from careful observation of my patients, that the perimetritis, salpingitis, and oöphoritis coexisting with many cases of retroflexion will subside after the uterus has been anteposed by some method ; further, that practically the method practised a number of times by me is equally as affective as those practised by many of my colleagues, and excels all in the saving of time. Yet I reiterate that it depends entirely on the particular case which procedure is preferable. In consequence, eclecticism is necessary.

We meet with cases occasionally where we intend to operate only with a view to break up the adhesions and correct the displacement ; but upon opening the abdomen it is found that the disease of the adnexa on one or both sides is so extensive as to leave the repair by natural means entirely out of the question. Such cases have been encountered by me several times, so that the operation, instead of being a hysterorrhaphy, has turned out to be a salpingo-oöphorectomy, and the ventral fixation the auxiliary measure. I therefore do not enumerate these cases among the operations mentioned. I will also say that in one instance of this class the operation has, as concerns keeping the uterus anterior, been a failure. The suspension method was used.

From the perusal of reported cases operated by anteflexing the uterus with a utero-vaginal suture, according to Schuecking, of Pyrmont, that method also deserves a trial in suitable cases, and I hope to be able to contribute my experience with it soon.

B. S. Schultze's method of forcibly breaking up adhesions formerly seemed to me to be fraught with too much danger to be carried out in practice ; but, from the cases published and a limited personal experience, I am convinced that, with proper care, no serious consequences will result in suitable cases, although, if time is no object, I unhesitatingly would give the preference to the manual treatment after Thure Brandt's method.

All displacements amenable to treatment with pessaries should be so treated. The pessaries must be selected with

great care. We have all seen the most intense direct and reflex symptoms, due to posterior displacements, removed by the wearing of a perfectly fitting pessary. A few unusual cases may not be amiss to serve as illustrations :—

The first is the most marked example which has occurred in my practice. The patient is now forty-two years old, married nearly twenty years. Has had four children and two abortions ; the last child was born two years ago. For several years prior to the time when the patient came under my observation she complained of insomnia, loss of appetite, a feeling of fear and anxiety ; she had hallucinations and illusions ; occasionally left her home because she imagined herself persecuted there. Several times she was prevented from committing suicide, so that it was necessary to keep her under constant observation. For a time she had been confined to the care of a private asylum, and, although under the care of different physicians at home and in hospitals, a vaginal examination had not been made. In the fall of 1883, when the patient was referred to me, she looked haggard and anæmic, complained of general malaise and the symptoms already mentioned above. On closer interrogation she stated that there were present lumbar and hypogastric pains, which about the menstrual period became very much intensified—so much so that she could scarcely leave her bed. The bowels were extremely sluggish, to such a degree that unless a cathartic was used she would not have a movement oftener than once in from ten to fourteen days.

The uterus was found slightly descended, indurated and large (hyperplasia), retroverted ; a bilateral laceration of the cervix and an enormous rectocele. The uterus measured three and a-half inches ; not very sensitive to touch and quite movable. The proposal to sew up the existing lacerations was met with refusal, and on account of her mental condition not insisted upon.

For a short period the patient was treated with borated glycerine tampons, and these were followed with a well-fitting retroversion pessary, besides general treatment and good

hygienic surroundings. In the course of six months she had improved beyond recognition, and all symptoms of her former melancholia with suicidal intentions had disappeared. She was discharged and requested to return once every four weeks to have the pessary seen to. After another interval of three months, at her urgent request the supporter was removed. Six weeks after this she was brought to me again with a gradual return of her former symptoms. The uterus was at once replaced, and in a few weeks good health was the result, which had continued up to one year ago, when the patient was last seen by me. She had had the lacerations operated upon after the birth of her last child, but it was necessary to continue the use of the pessary. It is in such cases that the Alexander or other indirect operation could be performed with good result, if dispensing with the pessary were necessary or desirable.

CASE II.—Mrs. S. K., æt. thirty-five years, married ten years; had two children, the last seven years ago; both labours were normal. The illness dated to a short period subsequent to her last delivery, consisting of headache, tachycardia, nausea and vomiting, backache and blurred vision. The headache, nausea, and vomiting were most intense and nearly constant. I have seen the nausea and vomiting so persistent about the menstrual epoch that it became necessary to use nutritive enemata for three to four days. Menstruation was irregular and profuse. The condition existing was an enlarged prolapsed ovary, retroversion, endo- and perimetritis. Three months' treatment sufficed to restore the patient to perfect health. In this case a number of months had elapsed before the patient could be induced to permit a vaginal examination; it was only due to her becoming worse from month to month that she finally submitted.

The relation between eye troubles and the uterus are known to us all. I need only refer to the works of Mooren and Salo Cohn on this subject.

Nuel on "*Des Amblyopies Réflexes*," page 700, cites the interesting case of a widow whose physical strength had been

gradually diminishing for several years. During the past few months she had lost her sight to such an extent that she could not find her way alone. An examination showed that on the right side the sight was completely destroyed. With the left eye she could scarcely count fingers at a distance of two and one-half metres. Perception of colours was entirely lost; both pupils were slightly dilated and reacted slowly to light. On the right side the ophthalmoscope showed a cloudy grey colour as in moderate infiltration. The contours of the papillæ were cloudy. On the left side there was only a moderate hyperæmia of the papillæ. The urine contained neither albumen nor sugar. The patient also complained of dyspnœa, depression of the chest, headaches, tinnitus aurium, pain in the abdomen, hips, &c. After replacing the uterus and inserting a proper pessary, with general and other local treatment, she rapidly recovered and also regained her sight. As a proof that the eye affection was due to the displacement of the uterus, it need only be said that after removal of the pessary by herself her vision became impaired again, but was restored by the reposition of the uterus and wearing a pessary.

Cohn notes a case of double optical neuritis, due entirely to retroflexion, cured after replacing and supporting the uterus with a pessary. I myself have seen several instances of impaired vision in posterior displacements corrected by the wearing of pessaries. It is obvious that merely the correction of the displacement alone will not suffice in the majority of cases, but that other local and general treatment must be instituted. However, all treatment is useless unless the displacement which primarily gives rise to the complication is corrected.

These posterior displacements, with or without more or less fixation, where there is excessive tenderness in the parametria, and where there is oöphoritis, salpingitis, or both, associated, especially require great care and gentleness during treatment. They are also generally complicated with great sensitiveness at the os internum.

Here tampons, impregnated with a saturated solution of

iodide of potassium in glycerine (1 to 2), answer an excellent purpose. The medicaments may, however, according to indications be changed, viz., alum, boric acid, tinct. of iodine, 1 part to 60 parts of glycerine, either of these singly or in combination. Usually no attempt should be made to replace the retroverted or retroflexed uterus until the sensitiveness of the surroundings has been diminished.

Cæliotomy: This, and not Laparotomy, is the proper Greek Synonym of "Abdominal Section," Laparotomy being an Incision of the Flank only. By ROBERT P. HARRIS, A.M., M.D., Philadelphia, Fellow of the College of Physicians of Philadelphia, Member and Ex-President of the Philadelphia Obstetrical Society, Honorary Member of the American Gynæcological Society, Corresponding Member of the Royal Academy of Medicine and Surgery of Naples, &c.

The language of Greece and of the Greek islands, became of right that also of anatomy, more than two thousand years ago, by reason of the fact that two Greek practitioners of surgery, Herophilus, born B.C. 307, and Erasistratus, his colleague, three years younger, the former a pupil of Praxagoras, and the latter said to be a grandson of Aristotle, were the first to whom a quasi regal authority gave permission to dissect human bodies in the interest of science. Ptolemy Soter, and his son, Ptolemy Philadelphus, were, to a certain degree, patrons of the arts and sciences in Egypt; and directed that the bodies of executed criminals, to the abhorrence of national prejudice, should be given up for anatomical study. Their dissections were made in Alexandria, the capital, then under the dominion of Greece. These men gave to anatomy many of the names now in use, and surgical terms have in numerous instances originated in Greek anatomical roots. There were, it is true, earlier anatomists and anatomical terms, but the studies of Hippocrates, of Cos, B.C. 460; and later of Aristotle, 384, and Praxagoras, 341,

were of restriction made upon the lower animals, as they were also for centuries after the Ptolemaic exception, and are to-day in the empire of China. Many anatomical terms are as old as Hippocrates, and some that common consent has retained, although founded in error, were given when an *artery* was supposed to convey air, and an *aponeurosis* to be a nerve structure instead of a tendinous expansion.

At a later period in anatomical study we find statements that accord better with the more intimate knowledge of the present day, and terms of a more distinctive character in use, such as were applied to one region or organ and not to several, as was the case with *gastér*, which was abdomen, stomach, and uterus, but more particularly the stomach. Our corresponding word stomach has a double meaning, being not only the viscus, but is regarded as a more refined word than abdomen. This creates some curious and doubtful expressions: "A man was wounded in his stomach." "Which?" "He was kicked in the stomach and his bladder was ruptured." "He has a pain in his stomach; but his stomach is not involved, the trouble is in his bowels." The term gastrotomy came from the Greek root *γαστήρ*, and was first applied to incisions of the belly. When the practice of opening the viscus for the removal of foreign bodies swallowed in bravado, by accident, or by lunatics, was introduced, the term had two meanings, and the operation on the organ took the precedence. The prefix "gastro" relieved in part the confusion; but there was felt to be wanted some other from a Greek root, and, unfortunately, one was chosen in error, when there was another that had a true classic claim to be selected. The substitution was made by a medical student, and *λαπάρα* became the root, instead of *κοιλία* which, a better knowledge would have pointed out to him.

In order to obtain a correct synonym for "abdominal section," and the German term "bauchschnitt" (belly cut), based upon Greek terms of unmistakable meaning, we must first ascertain what word the Greeks made use of when they spoke of the abdominal wall. This we have ascertained to

be unquestionably the term *κοιλια*; which originally meant a hollow, and appears in the work of Hippocrates as the word for abdomen, stomach, and alimentary canal. At a latter period anatomists gave it a much more restricted and definite meaning, and it became the "belly" of the Greek writers. Rufus, of Ephesus, a distinguished writer and practitioner, born A.D. 112, used *koilia* and *gastér* as synonyms in the same sentence, and his paper entitled "Names of the Parts of the Human Body," gives this significant expression: "*The omphalos (navel) is the hollow which occupies the middle of the koilia, where we cut the veins which nourish the fœtus; the middle part of the hollow is the akromphalon*" (ἄκρος, the top, and ομφαλος, the navel). Here we have a distinct statement that the Greeks, seventeen hundred years ago, called the abdomen, in its parietal sense, the *koilia*. (Ρουφου του Εφεζιου — "Œuvres de Rufus d'Ephèse." Par Drs. Ch. Daremberg, et Ch. Emile Ruelle. Paris, 1879.)

Abdomen, belly, gastér, and koilia are, in a sense, of the same meaning, except the first, which is parietal, although to be definite, we say abdominal wall and abdominal cavity. "Belly" applies either to wall or cavity, and indicates convexity of form. *Gastér*, as applied to the abdomen, is superficial; but gastric may relate to the stomach or abdominal cavity. *Koilia* is best rendered *belly*, as it is ten times in the New Testament. When we cut through the abdominal wall we are said to incise the belly, and to open the belly. *Bauchschnitt*, or belly-cut, is superficial in its meaning, and may be performed in some cases without exposing the peritoneal cavity: "bauch" may be said of the abdomen, and "bauchhöhle" of the abdominal cavity. These double meanings in abdominal anatomy complicate the nomenclature of abdominal surgery. We have outside, or parietal, and inside, or deep-seated wounds, of the abdomen; both named from the same root in the Greek language.

Koilia, being Greek for the abdomen, coeliotomy, from *κοιλια* and *τομη* (incision) will be the proper scientific term for "abdominal section" and "*bauchschnitt*," according to several

professors of the Greek language who have been consulted in person or by correspondence. This is only in part a new coinage, as we have already several *coelios* in use, such as, "*coeliocèle*," for abdominal hernia, and "*coelio-paracentesis*," for tapping the abdomen, the Greek terminal being for puncture, while in *coeliotomy* it is an incision. There are several Greek terms that have been applied to parts of the abdomen, such as *upogastrion* and *étron*, for the belly below the umbilicus; but the word we require must apply to the whole abdomen, from thorax to pelvis.

Laparotomy is an old term, and may be found in many old medical dictionaries, where it has been correctly applied to the anatomical section to which it is limited through the meaning of its Greek root *λαπαρά*. As now used, it has an unwarranted extension to the abdomen, and usurps a place that belongs to another root. We have to consider a score of *laparos* to be found in dictionaries, which have strangely, and with apparently very little examination as to their origin and introduction, been accepted by abdominal surgeons in the chief countries of Europe and in America. It may be a difficult matter to eject the intruder after eighty years of occupation, particularly since it has been very firmly seated for the last ten or fifteen years; but we shall at least decidedly weaken the hold that laparotomy now has as a presumed synonym of abdominal section in Great Britain, Germany, and America.

The term laparotomy arises from the Greek root *λαπαρά* the meaning of which is fixed and definite, as shown by the writings of Hippocrates, and by scores of lexicons in different tongues. *Lapara* had among the Greeks but one meaning, and is best translated into flank in English, and *flanke* in German. It comes from *λαπαρόω*, to empty, because of the hollow of the waist as compared with the fulness of the abdomen. In the "*Œcomenia Hippocratis*," by Foesius, 1587, it is defined to be "*pars quæ est inter nothas costas et ossa quæ ad ilia pertinent.*" This definition of Hippocrates has been handed down by lexicographers to the present day. Dr.

James, in his folio medical lexicon, 3 vols, London, 1745, one of the most valuable in the English language, gives this definition to lapara: "the flanks—that is, the parts which are situated between the spurious ribs and the hips, or ossa ilia." Bartholomeo Castelli, in his "Lexicon Medicum," Neuremberg, 1688, says: "Idem quod *κενεων*, laterum, cavitas, ea corporis. pars quæ est inter costas spurias et ossa quæ ad ilia pertinent." Here "*lapara*" and "*ceneōn*" are pronounced to be synonyms. A third Greek word, *λαγων*, has also been used to express the same meaning. In Dunglison's Dictionary, 1857, we find "*Lapara*," abdomen, flanks, lumbi; *Lagōnes*, flanks; "*Ceneōnes*," flanks. Prof. John Redman Coxe, of Philadelphia famed in his day as a classical scholar, and as a special student of Hippocrates and Galen, of whose works he published an "Epitome," wrote a medical dictionary (1808), in which he defined lapara as "the flanks, or the parts between the false ribs and the hip bones."

It is plainly to be seen that the combination of *λαπαρα* and *τωμη* in the term laparotomy can have properly but one application; it is a flank incision, or, in German, a "*flankenschnitt*." No reliable authority has claimed that lapara is both flank and belly. Many leading French and Italian operators still cling to the use of *gastrotomie* and *gastrotonia* respectively, in reporting cases of abdominal section, and would no doubt welcome the introduction of a true synonym of gastrotomy, such as we present in *coeliotomie* and *coeliotomia*. In the thirteenth edition, 1873, of the celebrated medical dictionary by Littré and Robin, the term "laparotomie" is thus confined to its true meaning, "Operation de la hernie lombaire, ou de l'anus artificiel, pratiquée dans la region lombaire;" that is, an operation upon the rare hernia called a laparocele, or one of laparo-colotomy.

We now come to two important historical questions: 1. Who forced the term laparotomy into its present unscientific and untenable position? 2. When and how was this step accomplished? A careful research, in which very important aid was given me through several rare old theses kindly loaned

from the medical library in the Surgeon-General's Office, Washington, D. C., fixes the time as the year 1811, in which Mr. Freidrich August Fiedler, a medical student at Wittenberg, published a thesis in Latin, as a "medicinæ candidatus" for graduation, entitled "De Laporatomia novissimoque ejus exemplo," in a small quarto of thirty pages. This was based to some degree upon a true laparotomy which he saw performed by Dr. Gottlieb Heinrich Ohle, of Dresden, on October 17, 1810. As described by Fiedler, the operation was performed on a man of fifty, who lay upon his right side, and the incision was made vertically in the left flank, below the short ribs, to relieve, if possible, an obstruction of the colon. The intestine was found to be extensively diseased from chronic inflammation, and no relief could be given; so the patient died.

In 1817, Dr. Fiedler, then a graduate of six years' standing, reproduced his thesis under the title of "Ein neuer Fall von Laporatomie," and we find it occupying thirty-one pages of the *Magazine für die gesammte Heilkunde*, vol. 2, 1817. His end and aim appear to have been to extend the use of the term Laporatomie to all parts of the abdominal wall, and make it a synonym of and a substitute for gastrotomie. He does not advance any reasons to prove the validity of his position, or claim that he stands upon a classical or scientific basis, but simply states that the term is the same in character and office as the French "gastrotomie" (*gallorum gastrotomie*), and with this presumed to be granted, he assumes the right to coin a new set of surgical terms, some of which are curiosities in the light of science, when we consider the Hippocratic definition of the word *λαπαρα*, so positively and clearly given by the sage of Cos and his followers. Some of Fiedler's terms are "Laparo-gastrotomia" (which would be opening the stomach through a flank incision); "Laparoraphia," in the place of gastroraphia (the abdominal suture, which several hundred years ago was made with pins and a figure of 8 ligature wound around); "Laparo-hysterotomia" (the Cæsarean operation), the "laparo" being made to supplant the prefix

"gastro," in the title proposed in 1816 by Prof. Gardien, of Paris.

Following the lead of Fiedler, we find the production of another thesis in 1828, at Tübingen, entitled "*Dissertatio Inauguralis Medico-obstetricia, de Laporatomia Obstetricia;*" Ferdinandus Stegmeyer, Wemmenthalensis, sm. 8vo., pp. 22. This little pamphlet is very much to the same effect as the Fiedler monograph, and "laparotomie" is made to appear as the accepted title of old abdominal sections. Fiedler must have had a fertile conception for his time and years, and would appear to have anticipated, in his ideas, some of the accomplishments of coeliotomy as we see them in their reality now; such as liberating the intestines from adhesions; replacing the retroverted and adherent uterus; and removing the ectopic foetus.

In 1837 we have presented a third and much more comprehensive thesis, with the title "*Laparotomia et operationibus, quibus antecedere solet: Dissertatio inauguralis, pro gradu Doctoris Medicinæ et Chirurgiæ, Universitate Fred. Guild-Rhenana, Gustavus Stachelhausen, Barmensis, Bonnæ,*" 8vo, pp. 60. The author deserves credit for his extensive researches into the past records of abdominal surgery, citing cases from the earliest time down to his own, all of which he gives as if originally known as laparotomies. He includes the ovariectomies of McDowell, Chrysmar, Nathan Smith, John Lizars, etc.; the gastrotomies of Schwabe, 1635; Wesener, 1691, and others, upon men and women who had swallowed knives and other foreign articles; and the operations for imperforate rectum under Dubois, 1783; Duret, 1793; Desault, 1794, and others. He recommends abdominal opening for conditions that must have appeared extremely hazardous to older heads in his day, although most of them have been done of late years. To open the abdomen and empty an obstructed colon of an accumulation of fecal matter must have been regarded as desperate surgery half a century ago, although it is said to have been done by Praxagoras, in the fourth century B.C. But the language of Cælius Aure-

lianus, who is the authority, is of such a doubtful import, that what was really the character of the operation of Praxagoras is not at all definite ; it is thought by some to have been one for strangulated hernia, in which he opened the bowel.

In the *Handwörterbuch der gesamten Chirurgie und Augenheilkunde*, 1839, B. iv. S. 259-280, Prof. W. Walther, of Leipzig, presents an article on "Laparotomy," in which he defines the subject of his paper as follows: *λαπαρά*, der Bauch, *τεμνω*, ich schneide: sectio abdominis; Eröffnung der Bauchhöhle; Bauchschnitt. That is, Laparatomy is from *lapara*, the belly, and *temno*, I cut; abdominal section: the opening of the abdominal cavity, or the belly-cut. Nothing is said about the flank, or "the parts between the short ribs and the iliac bones." If this was a correct meaning of the Greek *λαπαρά*, my interpretation of the limit of application of the term laparotomy would be useless: but we prefer the definition of Hippocrates and of our best Greek critics, to the error here given by Walther, which is calculated to lead astray many who have not had occasion to investigate the subject. When I commenced to question the correctness of using the term laparotomy as a synonym of *bauchschnitt*, I was told by a student of Greek literature that *lapara* was any of the soft part of the abdomen: a second scholar pointed out its true meaning in unquestionable authorities: thus was I led to investigate the whole question, and to substitute a correct term for what I had in ignorance made use of, in speaking and writing upon abdominal surgery.

In the medical dictionary of Dr. Ludwig August Kraus, published in Göttingen in 1844, we are attracted by the definition of *lapara*, when we consider the fact that he has introduced twenty-six terms having this Greek root, which are certainly not in accordance therewith, or properly based thereupon. His definition is as follows: (*η λαπαρά, λαπαρην*) ein weicher (leerer holder) Seitentheil des Unterleibes, wie *λαγων, κενων*, Ilia, &c.: a soft side (empty hollow), lateral part of the belly, as the flank; ilia, &c. We should hardly expect, after such a meaning, to find "Laparo-hysterotomia;" "Laparo-cholecystotomia;" and "Laparo-gastrotomia."

The *Dictionnaire Encyclopedique des Sciences Médicales*, in 100 volumes, 8vo, has recently been published in Paris, and contains no article upon the so-called Laparotomie, but in its place, one of twelve pages on "Gastrotomie," by Dr. L.-H. Petit. This author gives, as I have done, the year 1811 as that in which "laparotomie" was introduced as a general term in abdominal surgery, and calls to notice the confusion of terms produced by the titles of various abdominal operations. For this reason he adheres to the use of "gastrotomie" as a general term for abdominal section, and one that has a Greek derivation, not from lapara, the flank, but from gastér, the abdomen. As gastér has the double meaning already referred to, we prefer to confine the gastros and gastrotomy to operations on the stomach as a viscus. It is a singular fact that, although there are in the Kraus Dictionary already quoted over a hundred "gastros," thirty-five "coelios," and twenty-six "laparos," in which are gastrotomy and laparotomy, there is no coeliotomy as the natural Greek synonym of gastrotomy.

Besides employing Coeliotomy instead of laparotomy, we should say, *Coelio-hysterotomy* (Cæsarean Section). *Coelio-hysterectomy*, for exsection of the uterus by abdominal incision. *Puerperal Coelio-cystectomy* and *Coelio-cystotomy*, for an exsection of an ectopic gestation cyst, or evacuating the same without its removal. *Coelio-elytrotomy*, for what was originally gastro-elytrotomy and incorrectly changed to laparo-elytrotomy. *Coelio-nephrectomy*, to indicate the abdominal exsection of the kidney. Where an abdominal organ can only be incised, or exsected through an opening into the belly, the prefix *coelio* is entirely unnecessary. Coelio-lithotomy is called for but coelio-gastrotomy is not. The term Cæsarean Hysterotomy ("Hysterotomie Césarienne") used by Petit, is an appropriate one, and so would Cæsarean Hysterectomy be for the Porro operation. It is sufficient to say, "gastrotomy," "cholecystotomy," "cholecystectomy," "splenectomy," &c., because the opening incision is necessarily abdominal. The kidney, uterus, ovaries and vagina may be operated on with-

out abdominal incision, hence the distinctive use of the coelio prefix to indicate the form of operation. Coelio is pronounced soft, as in coeliac (se-le-ak).

As a technical term, "*coeliotomy*" can be adapted for use to all of the languages of Europe by slight changes in its terminal syllable, which will have to be altered into *mie*, *mia*, *mi*, *mii*, *mier*, &c., according to the tongue in which it is to be expressed. In euphony, "*laparotomy*" has no advantage over it, while for classical correctness, "*coeliotomy*" is infinitely to be preferred. By a general use of this Greek term, all languages may be brought to an equality of meaning in reporting cases of abdominal section, and researches by indices can be more readily made in foreign tongues. "*Laparotomy*" will still have a place, as a term in surgery, but it will be that which it legitimately held up to 1811. It is a singular fact that this term should have been so generally accepted by the surgeons of nearly every country, when it had no legitimate claim for adoption, in an abdominal sense: it shows that a word to be used in common, was wanted the world over. We believe it is wanted still.

TRANSACTIONS OF THE GYNÆCOLOGICAL SOCIETY OF
CHICAGO.

Regular Meeting, March 21st, 1890.

The President, JAMES H. ETHERIDGE, in the Chair.

Exhibition of Specimen.

Dr. F. H. MARTIN: Mr. President, the specimen that I wish to put on record is one of carcinoma of the cervix and a portion of the body of the uterus. The patient was forty-five years of age, a Swede, married fourteen years, one child; had not yet reached the menopause. *History*.—Had been flowing quite profusely for five years every two weeks. Assisted by Drs. Byford and Hoag, vaginal hysterectomy was performed. Clamp forceps were used to secure the broad ligaments after the base of the broad ligament on either side

had been tied with strong silk. The forceps were removed at the end of seventy-eight hours; the ligatures came away about the eleventh day. The patient was discharged cured January 26th, one month after the operation. There was considerable pain in the right side, and I was a little afraid that infiltration might have taken place to some extent, and for that reason the forceps were placed as far away from the uterus as possible on that side. We removed the uterus with the tube and ovary of the right side.

Dr. PARKES: Why did you leave the forceps on so long as seventy-eight hours?

Dr. MARTIN: The case was very hæmorrhagic, and I had been reading of late of a number of cases of hæmorrhage following the use of forceps, and in these cases almost invariably the forceps had been removed very early, within twelve or twenty-four hours. I really could see no reason why they should be removed earlier than seventy-eight hours, and for that reason I allowed them to remain, so as to avoid every chance of secondary bleeding.

Dr. HENRY T. BYFORD: I witnessed the operation and would like to call your attention to one point, *i.e.*, the facility experienced in removing the uterus in this particular way, *viz.*, in tying the uterine artery and tissues around it first, and then using a pair of forceps above. There are thus no forceps in the way to interfere, and we can do the operation really quicker and better than if we used the forceps alone. I have operated in this way in five cases, all recovering. In a case in which I removed the forceps in twenty-four hours, I came near losing my patient from hæmorrhage. Fortunately I was able to tampon so as to check the hæmorrhage.

Dr. D. T. NELSON: The Society may remember that some months ago I exhibited an Outerbridge pessary for ante flexion, sterility, &c., and reported then that in my experience it would corrode and thus prove unsatisfactory and even dangerous. I have here three instruments. The one which has no tag upon it was worn one month, and you will see that it is corroded. The others were worn two months, and three

and a half months; this latter one has one arm completely destroyed. They are iron wire plated with gold, but the gold plating is not sufficient to hold the iron underneath. They will corrode.

*Report of Clinical Laparotomies during Eighteen Months at
Rush Medical College.*

Dr. CHAS. T. PARKES: I found considerable difficulty arranging in my mind the title of the remarks I wish to make to you to-night, and I do not know that the heading expresses exactly the idea. The method of operating is something of an innovation, in that the laparotomies are done in the public clinic room before several hundred students. The cases are presented under the supposition that their cure and results might be of interest to you, so I have gotten together the cases that have come under my control during the past two winter sessions, covering a period of about eighteen months, operated upon by me at the public clinic of Rush Medical College.

CASE I.—Miss Mamie M., Lincoln, Neb., age twenty-two, American, school teacher, referred by Dr. Going, family and previous history good, presented herself to be placed under my care, with a large tumour of the abdomen. The tumour was first noticed by the patient, a year previous to her coming under my charge, as a small lump in the lower portion of the abdomen on the right side. During the last four months it had increased rapidly until it filled the entire cavity. There was nothing peculiar or special about it in any way. It was diagnosed as a probable single large ovarian cyst, and operation advised, which was consented to and done before the class at Rush Medical College, November 3rd, 1888. There was nothing found after abdominal section except a large ovarian cyst; no peculiarities, no adhesions. The patient went on to complete and perfect recovery by primary union without interference or rise of temperature. Discharged cured November 30th, 1888.

CASE II.—The next operation was done December 1st, 1888. Mrs. P. V., Elk Point, Dakota, age forty-two, married fifteen years; two children; American; housewife; family and previous history good; referred by Dr. J. G. Conley. The patient had been suffering for the past two years; the history was that of an ordinary ovarian cyst, nothing uncommon being determined by examination. Abdominal section and tapping of the cyst showed the contents to be of a chocolate colour, containing sixteen pounds of fluid. There were a number of adhesions to many of the surrounding organs, but these were separated without difficulty, and the tumour entirely removed. No well-defined pedicle could be found, the tumour being nourished apparently by its adhesions. In this case no unfavourable symptoms arose in the course of the recovery, and she was discharged cured three weeks after the operation.

CASE III.—The next operation was done March 26th, 1889. Mrs. Helen G. Morrison, Ill., age forty-six, American; housewife; family and previous history good; married twenty-two years; three children. Patient first noticed the appearance of the tumour six years ago, the first evidence of trouble being pain in the lower portion of the abdomen, and in a few months she discovered a small lump in the right side, which grew rapidly in the last months of its development, accompanied with severe pain. Upon abdominal section the tumour was found to be universally adherent. This was a case requiring the greatest care in the separation of the adhesions from the uterus, broad ligaments, bladder, and all surrounding parts, the operation being necessarily slow and occupying about one hour. Notwithstanding that this was a public operation, and one of the most difficult that surgeons meet with, the patient went on to perfect recovery without a rise of temperature beyond 100°.

CASE IV.—Was operated upon April 27th, 1889. Mrs. F., Chicago, age thirty-five; French; housewife; family history good; referred by Dr. O'Shea. This patient had suffered for many years, and had been under the treatment of many

physicians, without relief that was satisfactory. She was relieved by rest in bed, under the treatment of several physicians, during the time she was kept in bed, but the moment she assumed the erect position and attempted to do her work the old trouble returned. Upon examination there was easily discovered an enlargement in the neighbourhood of the ovary, and an operation was advised. This enlargement was not greater, perhaps, than an orange, but the patient was very fat, and I can say that under the circumstances, with the abdominal surface loaded with fat, especially in a patient who had never been pregnant, whose abdominal walls had never been distended, an operation of this kind is attended with many difficulties. This patient went on to perfect and complete recovery without rise of temperature. Discharged cured May 30th.

CASE V.—On May 4th, 1889, I had another multilocular ovarian cyst with adhesions. Hattie K., age nine years, Three Rivers, Mich.; German; school girl; family and previous history good; duration of present disease, five months. Five months ago a small tumour was noticed in the abdomen; this increased very rapidly, attaining a diameter of eight inches, as ascertained after removal. Its pressure upon the rectum made it very difficult to secure an evacuation of the bowels, the large intestines being filled with masses of fæces at the time of operation.

The abdominal section showed universal adhesions, which were difficult to manage. The patient did well until the third night, when she became restless, got out of bed and sat in a chair, the nurse being asleep. From this time she began to sink, dying from exhaustion the fifth day. The autopsy showed the wound and the abdominal cavity to be in a perfectly normal condition. Previous to the operation cathartics and enemata had not secured an evacuation of the bowels; this not only increased the difficulty of the operation but gave the patient more to bear after it.

CASE VI.—The next case was one of papillomatous cyst. Mrs. S., Nebraska, age thirty-two; American; housewife;

family and previous history good. This patient gave a history of having found, six months previous to appearing at the clinic, a small tumour in the abdomen, which did not seem to increase in size, but the abdomen became rapidly distended, so that when she presented herself for examination it was as large as at full term of pregnancy, and full of fluid. No tumour could be found by external examination, but with the history given by the patient of having found a tumour before the abdomen became distended, and by vaginal examination, it was possible upon one side—I think the right—to get a very indistinct impression through the fingers of the presence of some hard substance high above the vaginal roof, and a diagnosis was made of probable ovarian cyst and an operation advised, which was consented to. At the abdominal section a large quantity of free fluid was discharged from the abdominal cavity, and as soon as this was emptied out there appeared the source of trouble. Here again was one of the most difficult cases to be met with under any circumstances. The entire pelvic cavity was occluded by a mass of papillomatous growth which obscured from view, at first, the exact position of the uterus and bladder. There was also present in this case something which I had not met before ; after the fluid was emptied out I was feeling around to determine the nature of the case, when I felt in the peritoneal cavity a mass of soft material the nature of which I could not distinguish with my finger. Finally I got it through the opening in the abdominal wall, and pulled out a mass of papillomatous growth as large as my fist, which was attached to the rest of the growth by means of a pedicle as large as ordinary twine. How this mass could be nourished through it I could not imagine. Those familiar with these cases know that the surgeon will be able to find somewhere a separation between the cyst wall and the surrounding tissues of the pelvic cavity, and as soon as the fingers get into this opening it will be rather easy to deliver the tumour. Of course the hæmorrhage is pretty free at first, but it is to be remembered that as soon as the separa-

tion is completed, no matter how universal the adhesions seem to be, and the base is tied, the bleeding ceases. There were many raw surfaces left after the separation, which were covered as much as possible by fastening together neighbouring portions of normal peritoneum with continuous catgut sutures. A glass drain was used. This case, difficult as it was, went on to recovery without any rise of temperature exceeding 100° F. Discharged cured September 27th, 1889.

CASE VII.—The next case, operated upon August 17th, 1889, was a small fibroid in the posterior wall of the uterus, and cystic left ovary. Mrs. B., Merrill, Wis., age thirty-seven; American; housewife; referred by Dr. Munroe. This case is of no particular interest; there were no difficulties whatever attending the operation, which consisted in abdominal section and removal of left ovary. She went on to perfect recovery, and was relieved of the principal symptom of which she complained, severe and periodical attacks of nervousness, which seemingly had not been amenable to treatment of any kind during several years in care of physicians. Discharged cured September 7th.

CASE VIII.—The next case is certainly one of interest to you. The operation was done September 28th, 1889. Mrs. I., Plainfield, Wis.; American; housewife; forty-three years old; family and previous history good until two years ago.

Oöphorectomy was done for a peculiar kind of epilepsy which had existed for two years, coming on every menstrual period, and showing no tendency to manifest itself at any other time. At first the attacks were slight and hardly noticeable by the patient or her friends, but they so increased that when the patient came to see me at the hospital she had had every operation done upon her that could be done, so far as the external genitalia were concerned; and notwithstanding the fact that she had, apparently, received all the care that physicians ordinarily give to a patient, she still had these convulsions, and they had increased to such a degree that she had as many as ten positive epileptic convulsions in a day. They never came on until menstruation was started,

and they ceased with menstruation. I thought in this case there was a very plain indication for causing the cessation of menstruation, if possible, bringing about the menopause as early as could be done. She was advised to have an operation done for the removal of the ovaries and tubes, which was performed. The stitches were removed on the seventh day; she had no trouble from the operation. She stayed in the hospital for three months, and during that period had a slight convulsion on the second return of the period of menstruation; on the third return she had three convulsions, which were rather severe, the first day of menstruation. Between that and the next return of menstruation she went home. Since that time I have received letters every month from the husband; she has had no convulsions whatever, the occurrence of the convulsions being supplanted by the appearance, at the time of menstruation, of increased nervousness and restlessness. But the husband says in his last letter that this has begun to subside. He also states that her general appearance is becoming more and more like it was previous to her first attack.

CASE IX.—Mrs. S., Three Rivers, Mich.; aged forty-five; American; milliner; previous and family history good. Five years ago patient noticed a small lump in the lower part of the abdomen, which increased very slowly in size until four months ago, since which time it has grown rapidly. Menstruation has been irregular, and entirely absent for four months.

The pedicle was very broad and short. The first ligature did not entirely control the hæmorrhage, so a second one had to be applied. The patient recovered normally, being discharged three weeks after the operation.

CASE X.—The next case was a small twelve-pound ovarian cyst; operation done October 15th. Mrs. Cassius C. G., Baraboo, Wis., aged twenty-eight; American; housewife; previous and family history good; duration of present disease, eighteen months. Referred by Dr. English.

There was nothing unusual about it in any way, the patient's recovery being normal and perfect throughout, without rise of temperature.

CASE XI.—On October 19th, 1889, another interesting case was operated upon. Miss A. M. Doland, Dakota, aged nineteen; German; domestic; family and previous history good; duration of present disease, four years.

This girl presented herself with an extensively distended abdomen, and with this history: Four years ago she began to have some abdominal distension, which went on rapidly for a year, when she was tapped and thirty-two pints of fluid withdrawn. The abdomen filled up again in the course of the next year with the same amount of fluid, and the same occurred in the third year; and finally in the fourth year she came under my care and I decided to do the operation of removal of the cyst. In making the vaginal examination in this case, I could feel through the roof of the vagina a hard substance of some kind which ran obliquely across the pelvis from right to left, just as though a lead pencil were placed across; so I concluded that the case was one of dermoid cyst containing bone. The tumour, with contents, weighed forty pounds. The patient went on to complete recovery. I have brought this specimen to show you to-night because it is of considerable interest; it shows the superior maxillary bone, the nasal bone, and part of the frontal and malar bones, and in this part of the upper jaw tissue you will be able to discover teeth. It is interesting because of the mass of bone tissue found within it. The patient was discharged perfectly well November 12th, 1889.

CASE XII.—The next case was one of ruptured papillomatous ovarian cyst; operation done December 9th, 1889. Mrs. Wm. M., Pilot, Ill., age forty, American; housewife; duration of present disease, two years.

There is nothing about it of special interest, except perhaps that there were so many adhesions and raw surfaces left in the pelvis and abdominal cavity that I deemed it proper to use a drainage tube. The patient was discharged January 13th, 1890. Three months later she is reported as having some evidence of return of disease.

CASE XIII.—The next case was an ovarian cyst; nothing

noticeable in connection with it. Operation on February 8th, 1890. Miss Mary F., age twenty-four; American; nurse; family history good, except that her father died after an operation for the removal of a tumour, and a sister died of tuberculosis of lungs. Previous history good.

Ovariectomy was done very quickly, the entire operation lasting twelve minutes. The girl presented herself with a cyst which we found subsequently contained thirty pounds of fluid; but so far as the girl's appearance went, there was nothing to call attention to her as being diseased or sick in any way. When I uncovered the surface of the abdomen and determined the nature of the trouble, I said to the gentlemen about that I could do a very rapid operation in that case, because I thought the cyst had no adhesions. It has been proven to me on several occasions that when the general health is not affected by the tumour it will not have many adhesions, but when the patient is emaciated and the general health suffers there will be adhesions. Discharged March 14th, 1890, cured, not having had an unfavourable symptom.

CASE XIV.—The next case was a small ovarian cyst of the right ovary and inflamed left tube. Mrs. G. K., Three Rivers, Mich., age forty-seven; German; housewife; referred by Dr. I. Kles. Family and previous history good. Duration of present disease, four years.

The operation was done March 11th, 1890, and she went on to recovery without difficulty. Discharged cured April 5th, 1890.

CASE XV.—The last laparotomy done was for a cyst of the broad ligament containing eighteen pints of fluid, done March 15th, a week ago. Mrs. W. H. D., Charlotte, Mich., age sixty-one; American; housewife; family history, tuberculosis and carcinoma in the family; previous history good; duration of present disease, two years.

Tumour was at first very slow in growth, but since five months very rapid. The tumour was peeled out of the broad ligament as an entire cyst, the edge of the broad ligament being tied and dropped. The patient has gone on from the

day of the operation until the present time without any interference whatever—in fact, says that she feels much better since the operation than before. Discharged cured April 15th.

CASE XVI.—The next case I have to report was done April 16th, 1889. It was a case of ectopic pregnancy. The patient, Mrs. Minnie H., who was referred to me by Dr. O'Shea, of this city, was twenty-six years old, one living child eight years old, and three miscarriages. Three months before coming to me she supposed herself to be pregnant; she had missed a term, and in the interval before the second time of menstruation she was seized with severe pains in the pelvis, had symptoms of shock and prostration, and a bloody vaginal discharge. A physician saw her, and detected on vaginal examination a mass on the left side of the uterus, with a considerable swelling projecting up into the abdominal cavity. In a few days she was again seized with the same colicky pain in the pelvis, and again had a bloody vaginal discharge. She was brought to the hospital and placed under my care, and I diagnosed ectopic pregnancy. An operation was done for its relief, before the class. The abdomen was opened and the ruptured tube discovered. After the removal of great masses of blood the tube and sac were opened freely; no foetus was found, but parts of the placental tissue were found, removed, and examined. In this case I thought it was too hazardous to attempt the removal of the Fallopian tube; the opening that was made in it was stitched into the edges of the abdominal wound, and then all the accumulated blood was scooped out of the cavity by the fingers and otherwise, and the cavity filled with iodoform gauze. At intervals of two or three days portions of the gauze were removed until the cavity finally shrivelled up and closed. The woman left the hospital well, and is well to-day.

CASE XVII.—The next operation was done not long ago, March 4th, 1890. Mrs. S. J., Lake View, Ill., forty years old: Swedish; housewife; previous history good. Referred by Dr. Palmer. The woman is still in the hospital. The

history is similar to that of Case XVI. in the development of evidences of pregnancy and the commencement of symptoms of rupture at the time of operation. In this bottle there are a portion of the clots that were removed and saved for examination. In both of these cases there had been a long interval between the last pregnancy and the occurrence of this supposed pregnancy, in the first case eight years and in the last case nine years. This is an important factor in these cases. I think Mr. Tait insists that it is one of the principal signs to be remembered. In many of these cases there is this history of a long period of years between pregnancies; then the cessation of menstruation; then comes the history, at the end of two months, of severe colicky pain in the lower portion of the abdomen, an extreme pain causing shock and prostration, all the evidences of blood loss and vaginal discharge, and in many cases the extrusion of the decidua through the vagina; as in this case the patient told me pieces of skin were discharged through the vagina. This patient was operated upon before the class. There were found in the abdominal cavity large masses of blood filling up the pelvis. The Fallopian tube upon that side was ten times its normal size, with an opening through which protruded large clots of blood. These were all cleaned out and a ligature thrown around the Fallopian tube between the sac and the uterus, and the tube removed. In this case, as I had cleaned everything out and then removed the sac, there was nothing to sew to the abdominal walls. Here was a large cavity with little particles of blood that I was afraid to leave inside by attempting to sew it up, so I filled the cavity with iodoform gauze and let the intestines come down against it, and sewed up the wound. This gauze was left in several days without any disturbance, because the patient showed no reason why there should be any disturbance of it; then we commenced to pull the gauze away; every day a piece was pulled away, and it kept perfectly sweet and clean. The abdominal wound is healed, and the woman will be well in a short time. The patient was discharged cured April 26th, 1890.

CASE XVII.—Mrs. A. L., Chicago, age thirty-three; Canadian; housewife; family history good; previous history good until date of marriage, twelve years ago. Referred by Dr. Munroe. Operated on June 8th, 1889. Discharged September 3rd, 1889.

CASE XIX.—Operation September 28th, 1889; discharged November, 1889. Mrs. Wm. H., age twenty-five; American; housewife; family history tubercular; previous history good until one year ago. Referred by Dr. Knox. The disease commenced with severe pain in lower part of the abdomen. A swelling appeared in this region, evacuating a large amount of pus through the bowels, which had been repeated several times. There is a resonant tumour in the right iliac region just above Poupart's ligament. Abdominal section disclosed a right pyo-salpinx with universal adhesions. The sac could not be drawn up into the abdominal incision.

An opening was made into the abscess from the vagina by means of a pair of long curved scissors guided by the hand in the abdominal cavity, and a rubber drain was introduced. In doing this the bladder was wounded. The abscess drained nicely; the wound of the bladder healed under the use of a retention catheter for one week. The abdominal wound healed normally.

CASE XX.—Operation January 7th, 1890. Mrs. Fannie S., Chicago, age forty-four; three children; American; housewife; family and previous history fair. Seven months ago first felt tenderness in the lower portion of the abdomen; a month later first noticed some swelling. Patient was treated in Cook County Hospital for three months; lost much flesh, became very weak, had febrile attacks, the evening temperature reached 101° . Incision in the median line, aspiration of eight ounces of pus, sewing of sac to abdominal wall, free opening of sac, introduction of drainage tube and iodoform gauze tampon. Abdominal wound healed and the abscess cavity drained well, a sinus containing a drainage tube and discharging a small amount of pus still persisting.

I don't know that I need to say very much about these

three cases; they are all pyo-salpinx and pelvic abscess, and all recovered. I imagine any one who has much laparotomy work to do will bear me out in saying that these cases of pelvic abscess very frequently present difficulties that are troublesome to overcome, even in an ordinary operating room, surrounded only by assistants. There is considerable trouble as to the outcome of many of these cases, because they are so apt to be surrounded by adhesions, and they are so apt to form underlayers or to form adhesions in the neighbourhood of deleterious fluid, which has a tendency to go towards the peritoneal cavity; hence they have to be handled carefully. These cases presented no particular difficulties, except that, in two of them, from an old opening into the rectum there had come, in one on the right and in the other on the left side, a gassy tumour, circumscribed in character, well out towards the ileum, in one case below Poupart's ligament and in the other above, which was tympanitic, crackling under pressure of the finger, showing the presence of gas, yet not enough pus in its formation to cause it to come to the surface and ulcerate through. In both cases laparotomy was done. The case that did not recover from the abdominal section was one of pyo-salpinx. This cyst was peculiar, in that it showed a disposition to go above the pelvis towards the abdominal walls. The woman had been in several hospitals, and I had decided that, notwithstanding it was high up, with its acute course, tenderness, and peculiar feel, there was pus in it, and I advised her to have abdominal section done to find out, and we did find it. The cyst wall was fastened to the abdominal wall, and the cavity packed with iodoform gauze. She recovered without difficulty.

CASE XXI.—The next case was a cyst of the pancreas. Mrs. W. E. S., Carthage, Mo., age twenty-four; family and previous history good. The operation was done December 11th. Four years ago this patient noticed a small round tumour in the neighbourhood of the pancreas. It did not show much disposition to increase in size at first. Two years ago she became pregnant, and during the pregnancy it did

not show any disposition to grow ; but after delivery it grew rapidly, so that when she presented herself the upper half of the abdominal cavity was filled with a fluctuating tumour. It could be differentiated as belonging to this portion of the abdominal cavity, because the resonance was all below ; and it could be diagnosed as a post-peritoneal growth from the fact that here and there, by careful percussion over the surface, circumscribed resonance could be determined, marking the course of the intestines between the abdominal walls and the tumour. It was diagnosed to be a pancreatic cyst, partly from the history and partly from the examination. An incision was made through the abdominal walls, and of course as soon as the intestines made their appearance the diagnosis was complete. Crossing over the surface of the tumour were many large veins and arteries from the mesentery and the omentum, and the question came up what it was best to do. Now, when I have a doubt about any sort of growth or cyst, especially if its contents are harmful, I make up my mind to carry out the same plan as carried out with reference to abdominal abscesses—*i.e.*, to shut off the peritoneal cavity first, so it will not be affected by anything that comes out of the cyst wall. The cyst wall was fastened by sutures to the centre of the incision all the way round. Then the abdominal incision was closed up to this point, and an opening made, and twelve pints of clear, yellowish fluid discharged, which proved to be pancreatic. The cavity was washed out thoroughly until the fluid came out clear, and then the cavity was packed with iodoform gauze, which kept it perfectly aseptic. This gauze was removed from day to day, the cyst wall shrivelled up and the cavity disappeared, and the patient was cured at the end of two months. She has since remained very well.

CASE XXII.—The next case is interesting ; it was not a female, but a male. Mr. J. G. K. Boscobel, Wis., age thirty-two ; American ; farmer ; family and previous history good. Referred by Dr. Collins.

Male patients represent what I am after as well as do the female patients, *i.e.*, the doing of these operations before large

assemblies. This was a large papilloma of the kidney. He came to us with a greatly distended abdomen upon the right side, with the history of a growth commencing posteriorly just below the ribs and extending downward to the ileum. It seemed to fluctuate and was very elastic. An incision was made to uncover it, and according to the methods I have already described. The post-peritoneal covering was stitched to the abdominal edges and an opening was made into the mass. It was found not to be fluid, but to be made up of a mass of papillomatous degeneration connected with the kidney. If there ever was a case which demonstrated the beneficial effects of this manner of treating large cavities and keeping them from septic trouble, this was one. Nothing could be more likely to take upon itself septic action. This large cavity was filled to overflowing with iodoform gauze, and there never was any septic trouble, the cavity filling up quickly and the gauze being removed as it filled up. The patient recovered entirely from the operation, and was discharged after three months, a sinus remaining.

CASE XXIII.—The next case, operated upon August 27th, 1889, is one which you will excuse me for presenting to you, as I have presented it to the Chicago Medical Society. Mrs. B., La Valle, Wis., age twenty-six; German; housewife; mother of two healthy children; family and previous history good.

This woman came to me with a tumour of the left kidney as large as a cocoanut. The diagnosis was made, and its position determined by the rules we carry out in these cases. The specimen is on this plate; it proves to be an adenoma of the left kidney. It is interesting as showing that the mass of kidney has been thinned out, and that the cavity is filled up with the tumour. Upon this side you see a complete cast of the pelvis of the kidney terminating in the ureter. This tumour was removed by the anterior incision opening carefully into the peritoneal cavity, making an incision in the posterior peritoneum in the outer side and in the course of the descending colon, carrying the colon over to the right, expos-

ing the kidney and removing it, making drainage through the posterior wall by passing scissors through. This woman was four months pregnant when this operation was done, but it caused no trouble, and she went on to full term and was delivered of a healthy child, recovered, and is well to-day. Patient discharged cured September 27th. At end of eight weeks was able to do her own housework.

CASE XXIV.—The next case I have already presented to this Society—operation May 25th, 1889. Mrs. F., Chicago, age forty; English; housewife; family and previous history good. Referred by Dr. Bryan. It is a large uterine myoma, which makes up another of the deaths in this series, but one which probably could have been avoided. Patient died May 30th of intestinal obstruction without inflammation.

CASE XXV.—In this case, an epithelioma of the uterus was removed by vaginal hysterectomy; operation September 24th, 1889. Mrs. Lydia H., Chicago, age forty-four; American; housewife; one child; family and previous history good; duration of disease, one year.

There is nothing particularly interesting in this case except that profuse hæmorrhage occurred some six hours after the operation, during a fit of vomiting, and when I came to examine her I found upon the left side the tissues at the base of the forceps had pulled out and left the uterine artery free. By the application of tamponing the hæmorrhage was stopped and never recurred, and the patient went on to recovery. Patient discharged cured October 12th, 1889.

The next three cases you will allow me to pass by without much reference to them; they are cases that you are not particularly interested in, one a cancer of the stomach, the other of the liver and mesentery. In the first case laparotomy was done for the purpose of relieving the patient, if possible, by opening an anastomosis between the stomach and the seat of the trouble. In the other case operation was done for the removal of a very painful carcinomatous nodule at the umbilicus. It may be well for me to say that cases of development of a very hard, tense, somewhat circumscribed

mass affecting the umbilicus and surrounding tissue of the abdominal walls to a slight degree, accompanied with severe symptoms of emaciation pointing to severe and troublesome disease, will almost always indicate the presence of carcinomatous disease affecting the liver.

CASE XXVI.—Operation April 2nd ; died April 3rd. Mr. S., Bloomington, Ill., age fifty-three ; carpenter ; family history excellent ; previous history, many years dyspepsia ; present symptoms those of carcinoma occluding pylorus ; patient extremely emaciated, not having taken nourishment by mouth for weeks ; operation, gastro-enterostomy. Patient died twenty-four hours after the operation, from exhaustion.

CASE XXVII.—January 22nd, 1890. John R., Reedsburg, Wis., fifty years old ; American ; farmer ; family and previous history good ; duration of disease, five months. The wound healed normally.

CASE XXVIII.—Operation October 12th, 1889. Died suddenly, probably of thrombosis of pulmonary artery ; autopsy not permitted. Mrs. Louis B., Chicago, age fifty-one ; German ; housewife ; family and previous history good until a year ago. Referred by Dr. Adolphus.

CASE XXIX.—Operation March 8th, 1890. Mr. A. R., Chicago, age twenty-one ; American ; street-car conductor ; family and previous history good. Referred by Dr. Bridge. Duration of disease, ten months.

Has suffered pain and tenderness in the ilio-æcal region since ten months. During this time he has had three attacks characterised by severe pain, high fever, and increased induration in the affected region. Last attack came on three weeks ago. Treatment : Incision over cæcum four inches long into the abdominal cavity. Numerous adhesions were found between folds of intestine. A large piece of omentum, hard and contracted by inflammation, was found adherent to the cæcum and abdominal walls ; was ligated and removed. The cæcum was adherent throughout to the iliac fossa ; the appendix could not be found. Recovery perfectly normal. Patient discharged cured April 2nd.

CASE XXX.—Mr. John L., Chicago, age forty ; American ; mantel setter ; family history bad ; previous history good ; duration of present disease, several months.

The last case is one in which I did laparotomy for the purpose of relieving a distended abdomen which examination showed to be filled with fluid. Without displacing this fluid, by pretty firm pressure of the hand in different directions it was possible to determine some nodulated masses here and there in the peritoneal cavity. Diagnosis was made of tubercular degeneration of the peritoneum, and abdominal section done for the purpose of establishing drainage and taking off the pressure from the organ, and possibly leading to the reported recovery in such cases. An operation was done and the cavity of the peritoneum found full of fluid, and the peritoneum and abdominal walls covered with nodules in all directions, the omentum rolled up into wads, and these filled with tubercular nodules. Drainage was used, and the patient recovered from the operation without difficulty.

This presents to you a series of 30 cases. Of these 15 were ovarian, and out of the 15 but 1 death. In this series there were 2 extra-uterine pregnancies, 3 pyo-salpinx, all recoveries ; 1 cyst of the pancreas, 1 recovery ; 2 troubles of the kidney—1 complete removal of the kidney, the other partial removal—both recoveries ; 2 troubles of the uterus, 1 cancer with perfect recovery, 1 large myoma with death ; 3 cases of carcinoma, 1 of the stomach, 2 of the liver and other organs—1 (of the stomach) death ; 2 (of the liver and other organs), 1 recovery and 1 death ; appendicitis, 1 case, 1 recovery ; tuberculosis of the peritoneum, 1 case, 1 recovery.

As you look over this list, you will see that I am not doing myself justice in putting on it two cases of attempt to remove well-marked cancer of the liver and stomach ; they might possibly be left out, but I am well satisfied to leave it as it is. Thirty cases with twenty-six recoveries and four deaths is a record that I do not think can be exceeded anywhere. I am inclined to think it is an innovation, so far as this country is concerned, doing these operations before a large class.

I think I have had the hardihood before to remark, for which I was reproved, that, so far as ovarian tumours are concerned, the removal of a simple ovarian tumour is about the simplest operation a surgeon can do. But what I wish to call attention to principally is the fact that in different cities a great proportion of the large amounts of money that are given for hospital purposes have been expended in putting up special rooms for laparotomies, with all inside walls and ceilings of marble, and so arranged that it is impossible for microbes to get in or out. In some places the patient is as absolutely isolated as a case of small-pox. Physicians who see the case are let in in small squads, a few at a time, into these specially prepared rooms, and this is done under the impression that something outside the surroundings of the patient must be done in order that the success of the operation shall be brought up to the standard the profession believes in. But I contend all of that is useless. I do not believe any patient's life was ever saved by marble walls or tessellated pavements. My own belief, which I put in force so far as these thirty were concerned—cases that were taken without selection, cases that represented the moderately difficult and the severely difficult—is that it is what is put into the abdomen, the preparation of the operator and his assistants, of everything that touches the case about the wound, from which safety comes.

Dr. NELSON: I am very glad such a record has been made in this country, and I believe we can demonstrate eventually that microbes, while they may be carried, do not have wings, and are not likely to be blown about in our operating rooms. If we, our instruments, our ligatures, our assistants, do not carry them, I believe, with the reporter of these remarkable cases, we are not likely to get them into the patient. I do believe that there is something in the patients, that is, in their condition of health and strength and vigour, as to susceptibility to influence from the microbes or germs. Whatever may be the exciting cause of the disease, many patients in good strength and vigour will destroy, take up, or make away with—if you please—many of these germs, whereas

those who are not strong and vigorous will not and cannot do it. Although it will make perhaps but little difference in a series of cases of this sort, where good, bad and indifferent have to be taken, yet the condition of the patient at the time of operation is frequently an important factor, I think, in recovery, as well as the utmost care bestowed. I am certainly exceedingly pleased to find such a demonstration as this of the possibility of operating where only care of the patient and those immediately touching the patient is specially recognised, and not so much is thought about the atmosphere around or in apartments at a distance from the patient.

Dr. BYFORD: I have the satisfaction of knowing that while Dr. Parkes was operating in this way I was doing the same. Thinking to surprise him, I one day spoke to him about my work, and found out to my surprise what he was doing.

I commenced in the winter of 1888 to perform peritoneal sections before the class of medical students in the amphitheatre of St. Luke's Hospital. On the first Wednesday in January, 1888, I gave my first clinic at St. Luke's Hospital, removing diseased uterine appendages. At my second clinic, a week later, I removed an ovarian tumour containing three pints of fluid. A few weeks later I removed an ovary by vaginal section at the clinic. The next winter I opened the abdomen twice before the class. Up to that time I had selected my cases, for I was told that if I had a death I might be blamed for reckless operating. During the past winter session I operated upon every available case, opening the abdomen six times before the class. As I give only twelve clinical lectures each winter, this was as many cases as I could get in without excluding too much other material more important to the medical student. All these cases recovered without a sign of sepsis or other bad symptom attributable to the method of operating. I found no difference in the result from my private cases. I could add many more if I included operations before classes of six or eight from the Post-Graduate

Medical School, but I am now referring to those cases where medical students came without preparation, as to other clinics.

As test cases I may mention the following : In the case of ovariectomy above mentioned the abdominal fat was five inches thick ; the patient was insane, had cystitis, and escaped from her room four days after the operation and went to the bathroom. She recovered without a bad symptom except restlessness.

In another case, in attempting to drain an abscess under the abdominal walls, the whole thing parted from the walls and opened into the abdominal cavity. I did not in the least expect to have a laparotomy, had no preparation for one. Our hands, sponges, and instruments had been bathed in pus. I washed out the cavity and used drainage above and also into the vagina, and packed the pus surfaces with iodoform gauze. The patient got well. The temperature went up to 101°F. the next day, but it came down in a few hours, and she got along as well as though there had been no pus to deal with. In a case of pyo-salpinx I had the abdominal cavity open nearly two hours. An abscess of the ovary had over a year before opened out through the vagina, and when that contracted it brought the uterus, broad ligament, and suppurating tube back over it. The omentum and intestines, adherent over that, formed an almost impassable barrier to the pelvis. After enucleating the abscesses I spent some little time trying to check the hæmorrhage, which threatened to destroy the feeble patient. I finally tamponed the pelvis with iodoform gauze, and left the tampon there. She had no sepsis or other unfavourable symptom.

To my mind these cases show that there is a possibility, if we work carefully, of doing these operations before students and giving them the benefit of some training in abdominal section. I know of no kind of surgery in which it is as necessary for a man to have clinical experience before doing operations as in abdominal surgery.

I agree with the doctor fully, except perhaps on one

point. That is about ovarian tumours. There is nothing easier to remove than a simple ovarian cyst, but I do not think I have met with more than three simple ovarian cysts in a year, although I have removed quite a number. Suppuration, development under the broad ligament, rectum, or colon, extensive adhesions, malignant character, &c., &c., render ovariectomy one of the most formidable of operations. When the absurd notion shall have died out of the professional mind that it is better to wait until an ovarian tumour interferes with the comfort of the patient before removing it, then ovariectomy will more often mean simple ovariectomy, and the death rate will at last be so small as to frighten no one.

Dr. LEE: Mr. President, It seems this method of doing laparotomy is almost co-extensive. I have been in a number of places where I have seen laparotomy performed before large classes, and in as ill-ventilated and ill-prepared amphitheatres as could well be found. In the Post-Graduate Medical School in New York, which has hardly any of the modern ideas carried out in it, which has hardly any appliances for such operations, I saw laparotomy performed, in December, in the presence of probably twenty-five students; and if the number had been larger, it would have been all the same, as I was informed it was the custom to make operations before such classes as should present themselves in the amphitheatre.

Dr. MARTIN: Mr. President, It is interesting to know the methods of those operating in amphitheatres before large classes. I think it would also be interesting to know the methods employed for preparing the assistants' instruments, nurses, and the preparatory treatment of patients. I think that all operators have different forms that are gone through with, and it would certainly be very interesting to know Dr. Parkes' method for preparing those who take part in an operation.

I would like to speak in regard to the method of securing the broad ligament in vaginal hysterectomy. I think it will be noticed in the reports of cases at present that while the

broad-ligament forceps is used pretty generally, the majority of operators prefer to ligate the base of the broad ligament with strong silk—possibly not only with one ligature but two or three, if easily reached—and cutting that portion away, so that the broad-ligament clamp will have a very much smaller portion to secure; it being a fact that the broad-ligament clamp, even the strongest, will not secure all portions of the ligament with equal pressure; some portions are liable to draw out and bleed. A number of such cases are on record.

I think the point mentioned by the President is well taken. In fact, it would have saved me a similar difficulty if in a recent case I had looked much more carefully after securing the arteries that are liable to be severed when the vaginal section is made. In this case, before the patient was put to bed all hæmorrhage was secured, so far as the broad ligament was concerned; but I was called up in the middle of the night, the house doctor stating that secondary hæmorrhage had taken place. Putting the patient on the table, I found the hæmorrhage had been entirely from an artery in the corner of the vagina. The patient was pulseless, but with stimulation revived, and subsequently recovered.

Dr. T. J. WATKINS: I think the report of these very interesting cases of Professor Parkes shows that the good results of laparotomy depend much more upon the cleanliness of the patient, the instruments, the operator and his assistants, than upon the so-called "aseptic" conditions of the air of the operating room.

As long ago as 1883 Dr. Donald McLean did laparotomies before the students at the University of Michigan in the hospital amphitheatre. The students were permitted to go directly, without changing their clothing, from the dissecting to the operating room; yet in no one of his cases so operated on did any evidence of air infection develop.

Dr. BAYARD HOLMES: Mr. President, There are only two methods by which infection of any wound may take place; one is called air infection, the other contact infection.

The danger from air infection has been proved by all investigators to be comparatively slight, while the real danger lies almost entirely in contact infection. Upon some plates that I exposed for twenty-four hours at one time in a closed room of the fifth storey of a building in the centre of this city, twelve colonies developed to each square inch, and probably not one in fifty was of pyogenic bacteria. In the bacteriological laboratory we are accustomed to open gelatine tubes and other nutritive material for several minutes without the least expectation of any infection of the nutrient material. Plates of gelatine three or four inches square were exposed sometimes for five minutes, and only rarely does one become infected with any form of growth, not to mention pathogenic growth; so the danger from air infection is, you may say almost nothing. The danger from contact infection is greater, and yet it is not as great as we have been led to suppose.

There is one other element in this case which would not apply to other cases. The dangers which we fear in opening the peritoneal cavity are due to the infection with facultative parasites; that is to say, the infection with parasites that ordinarily live a saprophytic existence, but are able to take on a parasitic existence when in a favourable locality. The human body exists to-day because it has developed a resistance to that form of infection in all those localities where it is most exposed to it. The skin and the mucous membrane are adequate protection against the facultative parasites. Now, the serous cavities also have some resistance and that resistance is greatest where the danger of infection is greatest. Through the intestines, only a line away from the peritoneum, there is a mass of material full of these facultative parasites, and the peritoneum is very apt to be infected through the lymphatics from the contents of the bowel, hence the peritoneum has a very great resistance to infection of this kind; but that resistance is not found in the serous cavities which surround the lungs, the heart, and the larger joints, and I predict that without the use of antiseptic solutions no such series of thirty cases could be found where the plural cavity,

where the meringeal cavity, or where the large joints were opened.

There is one other point that is worthy of consideration by every operator, and that is the fact that it is an antiseptic precaution to make as small a hole in the abdomen as possible, to keep it open as short a time as possible, and use as few instruments as possible; and I look upon the success of Dr. Parkes in an open and dirty amphitheatre, with every source of contamination from the air, as due to the care which he bestows upon his instruments and sponges, and the fact that he operates rapidly, and that he uses his hands, and does not depend upon fifteen or twenty instruments and many assistants to do what his fingers will do as well alone.

Dr. W. W. JAGGARD: Apart from any personal feeling, as a Chicago physician I am very proud of Dr. Parkes and his record. I think it is one of the most remarkable papers I have ever had the pleasure of hearing: I think, too, Dr. Parkes must be accorded priority in establishing in this country the method of operating before a large class. It is not the same to operate before five or six or twenty-five as before a class of five hundred men. Dr. McLean, in Ann Arbor, did not do this thing; that was before the days of antiseptic surgery. Here we have an antiseptic surgeon, a man who has adopted modern methods, avowing his belief in the importance of contact infection.

Again, it is a remarkable fact that such an immense amount of material could be gathered together in any one clinic. I do not think there is another clinic in the country that has produced such an amount of material, and I am not aware of any on the continent of Europe, unless it be that of Billroth in Vienna; and during my term of two years there I saw no such material as is described by Dr. Parkes.

While the paper is a strong argument for contact infection, it is by no means a demonstration. There are cases that arise—not from air infection (air infection undoubtedly plays a very subordinate rôle, Kümmel and others showed that conclusively five or six years ago)—but there is a mode of in-

fection called self-infection, in which the woman actually infects herself; in which her unclean skin or dirty fingers, or micro-organisms lodged about the pubic hair or in the vaginal or cervical secretions, will produce infection. It is not only important that subjective antiseptics receive careful attention, but it is also important that objective antiseptics be attended to; there should be absolute sterilization of the field of operation. The term self-infection is not well chosen, and a few months ago Dr. Holmes criticised me on that point severely and justly. The term is a misnomer, but until we have some better word to express the idea of objective infection I think we should retain this term.

In puerperal fever it is necessary to recognise two methods of infection: contact infection, ninety-nine out of one hundred; self-infection, one out of one hundred.

As regards the individual cases, I was particularly interested in the case of menstrual epilepsy, and I had hoped to hear some remarks on the subject from Dr. Church. I have been looking up this matter somewhat in detail. I have three or four cases of epilepsy under observation in which the menstrual epoch seems to sustain some relation to the epilepsy, and I have about made up my mind to perform oöphorectomy in one case. My observations of Dr. Goodell's cases in Philadelphia did not favour the operation. And in the case reported by Dr. Parkes, the period of time that has elapsed since the operation is too brief to enable one to make any positive deduction. But it is one of the clearest cases of which I have knowledge.

The case of removal of kidney in pregnancy is of uncommon interest, particularly to the obstetrician, and sustains a recent doctrine that it does not make much difference what organ you take out above the level of the fundus or above the lower uterine segment, so long as you leave the uterine cavity intact. On the other hand a slight operation on the vulva or lower part of the vagina or uterus is apt to be followed by interruption of the pregnancy.

Not at all in the way of criticism, but for information, I

would like to enquire concerning the indication for operation in the case of enlargement of the ovary, the size of the tumour, and the reason for removing it. Ovaries do come under one's observation that are slightly enlarged. I have a case under observation now in which one ovary is nearly as large as my fist, but perfectly mobile, and productive of no symptoms.

Dr. ARCHIBALD CHURCH : Mr. President, I came here this evening by chance invitation, and had no idea of taking up the time of the gentlemen, but I am glad to say a few words in regard to the case Dr. Jaggard has particularly mentioned—a case of epilepsy apparently due to derangement of the function of menstruation. This strikes me as being of great interest, and I cannot recall any instance which points out more clearly the relation which sometimes is to be found between neuroses of a functional sort, like epilepsy, and peripheral irritation. There is no question in my mind that in the case cited the indications for operation were clear and imperative, and under similar circumstances I think anyone would be justified in proceeding surgically in this form of epilepsy. As Dr. Jaggard has said, however, the time is as yet too short to decide as to the real value of the operation in this particular instance, though it certainly promises to be a cure. I did not understand whether the operation had resulted in causing cessation of menstruation or not, or whether there was yet a discharge of blood. Certainly the periodical susceptibility does recur, as there is a tendency to disturbance of the nervous system at intervals corresponding to the menstrual epochs. But if menstruation still exists in spite of the removal of the ovaries, the question might arise as to whether removal of the uterus and tubes would also be indicated, and whether Péan is justified in the extensive operation he does in these cases.

I have seen two cases of epilepsy which were associated with the menstrual function, coming on very much as in this patient, but in which the convulsions were not limited so completely to the menstrual epoch, and both of which termi-

nated favourably with the menopause; but this cannot be anticipated as a rule. In my mind there is no question of the ability of irritation, ovarian or uterine, or in the tubes, to produce epilepsy. Nor is there any question, in my estimation, of the advisability of operation in clearly marked cases.

Dr. J. H. ETHERIDGE: It seems to me in view of the fact that most of us remember the tremendously particular preparations made ten or twelve years ago—spraying the room, using antiseptic precautions, &c.—as compared with the simplicity of the present method, it would be well for the speaker of the evening to detail a little *in extenso* the technique of the operations he has done and the preparations for them.

Dr. PARKES: In rising to close the discussion, I would express my thanks for the favourable manner in which this paper has been received. My friend Dr. Byford still will persist in saying that ovarian tumours united to the rectum and other parts of the abdomen are difficult cases, and I am glad to agree with him. My proposition is that a simple, unattached ovarian cyst is the simplest operation I have ever had anything to do with.

I hope Dr. Lee has not received the impression that I wished to assert that I was the originator and the only man to operate before bodies of men, but merely that operation before a general class is, so far as my acquaintance with other cities in this country are concerned, an innovation. I have seen the operation done many times in the presence of a good many men, but I have never seen it done in the presence of a large class—from four hundred to five hundred students—and I know there are few institutions where it is done as a regular thing—done just the same as an abscess is opened or any surgical operation is performed.

I am very glad indeed that two of the gentlemen have suggested that I should state what I believe in reference to the technique of these operations. They are not simple at all, but are the most rigorous preparations that can be made. I am especially pleased to have the point of self-infection referred to by Dr. Jaggard, because just as much care is taken with every one of these patients as was ever taken for operation in

a private room. It is my rule, from which I seldom depart, to have the patient under my close inspection and control three days before the operation, and during that time I try to disinfect the intestinal tract as possibly a source of self-infection. The patient is given freely of cathartics, and the intestines are emptied out entirely in every way by injections until the abdomen is as flat as it can be made, and by this means the intestines are kept out of the way during the operation, which is very important. Every operator knows that when the intestines are full or distended with gas it is the most troublesome thing in the world to get them out of the way. The patient is put in bed and kept in bed, and I think that is important. She is given a full bath of the entire body the first day before going to bed, and when she goes to bed all the hairy surfaces are shaven close, and then a special wash is given over the abdomen and genitalia; this consists of three or four washes with soap and water, particular attention being paid to the umbilicus. This is very important and should be done regularly. The line of the incision is washed with ether, and there is applied to the surface of the abdomen, the night before the operation, a compress of $2\frac{1}{2}$ per cent. solution of carbolic acid covered with an impervious dressing, and this is left on until the abdomen is uncovered for the operation. Not only is that done, but the vagina also is prepared with the bichloride douche, which is followed by one of sterilized water. The vagina is irrigated, not only for the purpose of getting rid of anything that may be a source of infection through the vagina or vulva, but to prepare it for interference if necessary to enter it for any purpose during the operation. The instruments are all specially prepared. I believe in having a large number of them at hand, so as to be prepared for anything. The instruments are prepared by being boiled thoroughly in water until everything is dead. They are prepared each time and are used for nothing else; that is another thing—I do not think these instruments should be used for all sorts of operations. I have the same assistants—with the exception of the interne, who is always an assistant

—about the case, and they are trained in the preparation of themselves, which consists in their washing with soap and water and scrubbing brush, then with antiseptic solutions, then with soap and water, afterwards covering the clothing with a gown so that the clothing is not brought into contact with the patient at the time of operation. The patient is wound with blankets passing about the shoulders and legs, leaving exposed to view only the surface of the abdomen. All these parts are covered with clean dry towels first, then by towels wet in a $2\frac{1}{2}$ per cent. solution of carbolic acid. I do not believe the wet towel should be brought in contact with the patient's body, as I think it increases the shock. You know it is a personal matter with me to prepare the patient as to shock. I believe quinine and morphine are of benefit, so all my patients receive five grains of quinine and one quarter of a grain of morphine.

I was glad to hear Dr. Holmes speak of the incision. I believe in a small incision and I believe in a large one. I believe when one gets accustomed to working he can do the work through a small incision, but a novice will need a large incision. Another thing of importance is that the peritoneum should not be disturbed much; the intestines should always be kept well out of the way and never allowed to come into the wound, if possible to avoid it—and in the majority of cases it is possible—and the field of operation is perfectly under the control of the operator. I believe that adhesions should never be torn or severed until they can be seen. I think a great deal of the bleeding that bothers surgeons comes from the fact that they cannot see what they are doing.

I believe I have gone over *in extenso* all I can say. Of course, the silks, the sponges, and everything else that is used should be prepared according to the best rules that are given with reference to making them perfectly aseptic. I never allow an assistant to put his hands or an instrument into the peritoneal cavity unless I direct him to do so; I keep everything out of the peritoneal cavity as far as possible. It is

proper for me to say that no antiseptic solutions are ever introduced into the peritoneal cavity, even when pus is present, other than sterilized water or a mild solution of boric acid.

Typhlitis with Recovery by Perforation into the Rectum.

Dr. BAYARD HOLMES : My specimen does not bear upon the paper of the evening, but is of some interest. It is from a *post-mortem* I made to-day, and it may be interesting from a diagnostic point of view. This is the rectum cut open, this is a part of the ascending colon, connected with the rectum by the vermiform appendix three and one-half inches long ; just beneath is the ureter running to the right kidney, and here, still lower, are the iliac vessels. The appendix is open from the cæcum up to its middle point, and from the rectum up to the same point, but nothing will pass through beyond that. We accidentally tore it here in getting out a calculus which lay half-way between the stricture and the rectum. This ureter, as you see, is enormous in size. The pelvis of the kidney was dilated, and the kidney had undergone a peculiar degeneration. This specimen is of no direct interest to you except as it shows how a typhlitis may end spontaneously. Besides making an abscess outward, it may end by perforation into any viscus, into the peritoneal cavity, or into the connective tissue spaces about. Suppose there was no abscess, it might have perforated into the ureter, into the iliac vein or artery, or it might have perforated into the bladder or rectum, and in a woman might perforate into the uterus ; and in the case of perforation into the peritoneal cavity it might produce an abscess only, or might produce general septic peritonitis. It might perforate into the connective tissue spaces, into the abdominal wall and pelvic floor, or show itself in any other part of the body where the tissues are connected. I exhibit it because I think it is of some diagnostic importance. You might have a tumour resulting from typhlitis by dilatation of the ureter, impaction behind the constricted rectum or small intestine, or aneurism of the iliac artery. It might be im-

portant to distinguish any one of these from ovarian tumour. Typhlitis must be considered when symptoms of pelvic inflammation are present and when pyo-nephrosis is diagnosed.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL
SOCIETY.

September, 1889.

A New Method of Treating the Stump in Abdominal Hysterectomy. By HENRY T. BYFORD, M.D., Chicago.

An ideal method of treating the stump in all cases of abdominal hysterectomy has not yet been discovered, and probably never can be. Each case will require the employment of a method adapted to the character and relations of the tumour.

A small stump, composed of normal cervical or uterine tissue, may sometimes be safely treated after Schroeder's intra-peritoneal method, or by the silk ligature and the cautery. The application, however, of the intra-peritoneal method to all cases has led (and must lead) to occasional disaster.

Extra-peritoneal treatment of the stump by ventral fixation has proven such a safe and simple way of extricating the operator from the toils of a difficult and dangerous operation, that it has found almost universal favour. It was the original method of Kœberlé, and will continue to be the only safe one in many cases with large stumps, or stumps composed of indurated or otherwise unhealthy uterine tissue. The main objections to it seem to be the unnatural fixation of the cervix to the abdominal walls, the slowness of the recovery, and the danger of a subsequent fistula or hernia remaining. These difficulties are partially met by Zweifel's modification of Wölfler's extra-peritoneal method. In Kelly's improved modification there would appear to be a liability of the superficial sutures to suppurate, and a tedious convalescence attending the closure of the granulating pit. All of these

modifications, however, lack the simplicity and rapidity of execution belonging to the use of the clamp or elastic ligature, are therefore, in some respects inferior, and cannot entirely supersede them.

Another method of treatment of the stump is by vaginal fixation. Meinert¹ suggested it, and others after him have recommended it, but no case, so far as I know, has been recorded in which it was successfully employed. He recommended turning the stump into the vagina through an incision into the recto-vaginal *cul-de-sac*. The objections would be the difficulty of access to the *cul-de-sac*, the necessity of separating the bladder so as to prevent traction, and the obstacles that might be encountered in cutting off the end of the cervix in case sloughing should occur and septicæmia follow. The raw surface left by the separated bladder could not be easily covered by peritoneum, and thus an extra raw surface would be left for the peritoneal cavity to manage.

There remains one other method, a variety of vaginal fixation, which has not, I believe, either been suggested, recommended, or employed, except in the case I am about to report. I adopted it, however, not because it was different from Meinert's, for I did not know (when I conceived it) that vaginal fixation had ever been thought of. To avoid an unnatural ventral fixation, I turned the stump into the vagina and choose a procedure which seemed to me, and still seems, the most direct and best one for the purpose. It consists in sewing up the short stump somewhat after Schroeder's manner, separating the bladder from the uterus, opening the anterior fornix near the cervix, turning the stump forward into the vagina, and fixing it there by a pedicle-pin introduced from the vaginal side, and a small gauze tampon placed in front and over it. By separating a flap of peritoneum from the posterior surface of the stump before trimming it and introducing the stitches, and introducing them under it, this flap may be united to the vesical peritoneum, and the peritoneal

¹ Schroeder : Krankheiten der weiblichen Geschlechtsorg.

cavity be protected from the stump. In case a rapid operation be desirable, the pedicle may be included in a clamp or rubber ligature, and turned forward into the vagina without suturing. When sloughing commences, the clamp or ligature and sloughing tissue can, if necessary, be cut off by the aid of a Sims' speculum. I recite the following case as an illustration of the possibilities of this method :

Miss Emma B., servant girl, aged forty years. Fibroid tumour of corpus and cervix uteri, extending into left broad ligament so as to fill the true pelvis. The tumour was growing and the suffering increasing, so as to render her miserable and unfit for her work. She was highly anæmic and despondent, although the menorrhagia was only moderate. Ergot was tried for a short time with the result of increasing the suffering without arresting the growth. The low situation and lateral development made it probable that I would have difficulty in treating the pedicle by ventral fixation. Hence I resolved to enucleate the projecting portion from its broad ligament bed, and finish the operation according to the new procedure I have indicated.

I succeeded in enucleating the tumour from the broad ligament and separating the bladder so as to apply the elastic ligature to the cervix, not, however, without having wounded the uterine artery on the side of the enucleation too far from the cervix to be included in the circle of the tubing. The shortness of the stump above the tube, and the proximity of the wound in the uterine artery to the left ureter, made it impossible for me to sew up the stump as securely as I wished. After opening into the vagina through the anterior fornix, I placed a pair of hæmostatic forceps on the base of the left broad ligament, from the vagina in such a manner that the upper blade was in the peritoneal cavity and the lower entirely within the vagina. As the stump was not sewed as securely as desirable, and as some necrosis and infection must result from the forcipressure, I left the rubber ligature on the cervix and easily turned the stump with the tubing into the vagina by means of cervical sutures left long for that purpose. I found it impracticable to shut off the peritoneal cavity completely from the stump,

since a small surface of rubber tubing lying across the posterior surface of the cervix, as well as the upper blade of the forceps, must remain within. I therefore stuffed a little iodoform gauze between the anterior wall of the bladder and the stump, to drain that space, after having put a glass drainage-tube into the *cul-de-sac* from above.

I removed the forceps and the gauze on the next day. The general peritoneal cavity was promptly shut off from the stump and its surroundings. No unusual symptoms occurred, notwithstanding the fact that I had searched the entire abdominal cavity twice over at the end of the operation for a sponge reported lost, and even yet not accounted for. Highest temperature was 102.8° F., observed only once, on the fourth day. On this day I introduced Sims' speculum and found the stump perfectly movable, but involved in decomposition. I pulled it down slightly by the ligatures, removed the rubber tubing, and cut off the stump at the point of constriction. At the next dressing the abdominal drainage tube formed a communication with the vaginal opening. The day after, I removed the glass tube and passed a rubber tube through from the abdominal opening into the vagina, both for drainage and irrigation; by the tenth day the odour could no longer be noticed, and the temperature ranged between 99° F. and 100° F. A small slough was passed March 15th, one month after the operation, without symptoms. The patient left the hospital soon after, entirely well except that a small, rapidly contracting, fistulous opening led from the abdominal walls into the vagina. The location of the cervix was a comfortable and natural one, although in a somewhat more than abnormally anteverted position.

As the patient received permission to return to my office and to enter the hospital if the fistula did not heal promptly. I infer that it has healed. She went back to her old place to work for a living.

Although my success in the case related was, I think, quite satisfactory, when the large bed of the tumour remaining in the left broad ligament and the shortness of the stump

are considered, I would hardly advise any one to leave in the rubber tubing except in case of necessity. Rather than leave the ligature to cause extensive necrosis in another case like this one, I would put a pair of hæmostatic forceps on each broad ligament, and immediately remove the whole cervix, as has been done by Dr. Mary Dixon Jones; but I can see no ground for removing the cervix, which is the keystone of the pelvic roof-structure, when the sutured stump can be treated extra-peritoneally in the vagina.

NOTE.—I have, since writing this paper, operated similarly, but without leaving the elastic ligature, and without sloughing. The cure was rapid and most satisfactory.

LIST OF EXCHANGES.

American Journal of Obstetrics.
Annali di Ostetriciæ Gynecologia, Milan.
Archives of Gynæcology, New York.
American Gynæcological Society.
Archives de Tocologie, Paris.
Academy of Medicine, New York.
American Lancet.
American Journal of the Medical Sciences.
Annals of Surgery, Brooklyn.
British Medical Journal.
Birmingham Medical Review.
Bristol Medico-Chirurgical Journal.
Braithwaite's Retrospect of Medicine.
Centralblatt für Gynækologie, Leipzig.
Revue Medico-Chirurgicale des Maladies des Femmes, Paris.
Dublin Journal of Medical Science.
Edinburgh Medical Journal.
Glasgow Medical Journal.
Journal de Medicine de Paris.
Journal of the American Medical Association.
Medical Press and Circular, London.
Medical Chronicle, Manchester.
Redaction du "Wratsch," St. Petersburg.
Obstetrical Gazette and Cincinnatti Lancet Clinic.
Practitioner, London.
Jahresbericht über Die.
Fortschritte der Geburtshülfe u Gynäkologië.
The University Medical Magazine, Philadelphia.
Wiener Medicinische Presse, Vienna.

CORRESPONDENCE.

NEALE'S MEDICAL DIGEST OR BUSY PRACTITIONER'S
VADE MECUM.

To the Editor of the British Gynæcological Journal.

SIR,—It is proposed to publish during the coming year a new edition of the above work, entirely re-arranged and revised, combining in one volume the records of the past fifty years, bringing it up to the end of 1890. At least three to four hours' labour daily on an average have been expended upon the book to bring it to its present stage.

The "Digest" affords to those engaged in literary work a most ready and valuable means of reference, while to the busy practitioner in his daily and hourly practice it is invaluable, for he has only to consult the work with ordinary intelligence when, without the aid of a single journal to which reference is made, he at once finds information as to the cause of many symptoms that may puzzle him, as well as suggestions that may have escaped his memory, or may have never come under his notice. The cost of issuing so peculiar a work is too large to justify me in incurring the expense without an assurance that it will be acceptable to the profession.

The book extending to 1,200 or 1,300 pages will be issued at 10s. 6d. a copy, post free in the United Kingdom, about June, 1891, to those gentlemen willing to take one or more copies, and who at once forward their names on a post card to my address.

I am, &c.,

RICHARD NEALE, M.D., LOND.

60, Boundary Road, South Hampstead, N.W.

. We can safely advise our readers to contribute to this work. It fulfils all and more than the author claims for it.—ED. B. G. J.

THE BRITISH GYNÆCOLOGICAL JOURNAL

VOL. VI.—NO. 24.

FEBRUARY, 1891.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 12, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 33 Fellows, 5 Visitors.

Dr. RASCH showed a very interesting specimen removed that day from a young woman who had been admitted a fortnight previously into the German Hospital under his care for uncontrollable vomiting of pregnancy. It was a double vagina and uterus duplex, of which the right half presented a fluctuating tumour corresponding in size to about three months of pregnancy. He heard after death that the patient had previously been in the London Hospital on account of the sickness, but nothing had proved of avail and she had been quite unable to keep anything down. Since her admission they had tried everything they could think of and as her emaciation and weakness seemed to threaten life, the sound was passed to induce premature labour. The patient was twenty years of age and it was her first pregnancy. Five days before, jaundice had developed and he began to think that he had to do with a case of acute atrophy of the liver, the more

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so as he thought he could make out a shrinking of the liver. The last menstrual period was three and half months before. Unfortunately the condition of the patient was such that she died from collapse. The ovum was found in the vagina. Post-mortem they found that the liver was not so much smaller as they had thought, and it was with some difficulty that they had been able to obtain the rare and interesting specimen.

Dr. HEYWOOD SMITH asked how soon after 'conception the sickness had supervened (Dr. RASCH : Five weeks), also whether Dr. Rasch could tell them what remedies had been tried at the London Hospital while the patient was under treatment there. He asked whether simple dilatation of the cervix had been tried and as to the actual cause of death.

Dr. GRIGG asked whether there were any signs of peritonitis or septic poisoning, also as to the pulse and temperature during the five days previously.

Dr. RASCH replied that the patient was in the hospital a fortnight and from the first her condition was very precarious, so exhausted was she. The pulse was quick and intermittent. The urine had been examined and contained little or no albumen. The temperature was subnormal 97, F. They had tried injections of morphia and then menthol, but nothing did any good. No peritonitic nor septic symptoms.

Dr. HEYWOOD SMITH in view of the peculiar interest of the case, asked that the specimen might be left in the hands of the Society, and that full details of the case should be supplied especially in regard to the various remedies that had been tried.

Dr. RASCH said he would be happy to place the specimen at the disposal of the Society and promised to bring the case before the Society in a complete form at some future time.

Dr. GRIGG showed the vagina and uterus removed from a patient who had died at the Queen Charlotte's Hospital on November 3rd. She was married and had been pregnant eight times having had five children at term alive. The last

had been delivered by the aid of instruments. Labour came on on the 26th October. She was 31 hours in the first stage and 24 hours in the second. He mentioned that she had last menstruated at the end of December and the pregnancy had lasted therefore close on ten months. At the end of the ninth month she had labour pains which passed off. As labour did not progress satisfactorily her medical attendant put her under chloroform and applied instruments, calling in the assistance of a professional friend. As he was unable to complete delivery the woman was sent on to the hospital where she was admitted on the 28th October. When he saw her he found the child's head presenting in the conjugate diameter. It was evidently a large child. The patient herself was a weakly woman with a feeble pulse. He at once applied Simpson's forceps and turned the head into the first position and delivery was effected without any difficulty. That was the more surprising seeing that the child weighed 11 lbs. 2 ounces and the conjugate diameter was $3\frac{1}{2}$ and the traverse $4\frac{1}{2}$. That was a good example of what could be done in the matter of turning the head from an abnormal into a normal position in spite of the assertion of some eminent obstetricians that it was impossible. There was more difficulty in delivering the shoulders than the head. The patient almost collapsed under the chloroform and during the first 24 hours she was troubled by sickness. There was no rise of temperature until the 2nd, when grave symptoms set in with sickness, dyspnoea, and prostration, together with a rise of temperature, and she died at 2 a.m. on Nov. 3rd. Dr. Allchin had performed the post-mortem examination nine hours after death, and reported as follows :—"The intestines were matted together and there were signs of old and recent peritonitis. The viscera and the lower half of the intestines were matted together by lymph, not recent, but recently broken down, of a greyish black colour with very little appearance of increased vascularity of the peritoneum. Just outside the utero-vesical fold of peritoneum there was a hole large enough to admit the tip of the finger, around which the peritoneum was very much

thickened. This hole allowed of a communication between the peritoneum cavity and an old abscess cavity behind the peritoneum. This cavity moreover communicated with the vagina by what seemed to be an old tear. The whole cavity was covered with a shreddy flocculent material. Nothing abnormal was noted in the cavity of the uterus. On introducing the finger through the aperture in the vagina it passed into the cavity behind the cæcum and not into the Douglas' pouch nor into the broad ligament. This abscess cavity was filled with a very offensive fluid, but strange to say the woman, neither at the time of the operation nor afterwards had any offensive discharge, in spite of the fact that the abscess cavity communicated with the peritoneal cavity and with the vagina. She lived seven days after delivery. When she had rallied from the effects of the chloroform she declared herself as feeling quite comfortable and continued so for six days. This was the third of a series of cases he had met with in which women who had had peritoneal mischief of some standing who had been admitted to the hospital without presenting any signs at all of their condition, who had died shortly after delivery, and in whom upon post-mortem examination the abdomen had been found more or less filled with pus. This patient's heart was fatty and there was an enormous dilatation of the pelvis, of the kidney, and ureter, but there was no pus present and no stone was found to account for this condition. It was the right kidney, being the same side as the abscess. He always used $\frac{1}{4},000$ irrigations of perchloride of mercury after delivery for two days twice a day. In his opinion the abscess was due to injury at her last pregnancy when she was delivered with forceps.

Adjourned Discussion on Mr. Jessett's Paper on "Some Observations on certain forms of Intestinal Obstruction and their Treatment."

Mr. JESSETT introduced the discussion by alluding to the importance of replacing the omentum over the intestines in all cases of abdominal section, as he had found in all his

experiments and in every post-mortem he had had the opportunity of seeing, after an abdominal operation that either the omentum or some part of the intestines was adherent to the parietal wound. He referred to a case recorded by Dr. Dalton, of St. Louis, in which that gentleman had performed laparotomy in a case of an acute appendicitis. The patient recovered, but in about a year afterwards he returned with a large ventral hernia. Dr. Dalton then made an incision in the site of the original wound, holding the cicatrix well up as he supposed from the intestines; when the knife entered what he took to be the peritoneal cavity, he found he had cut directly into the intestine which was adherent to the entire length of the cicatrix. Mr. Jessett next referred to a case of his own, on which there was a fæcal fistula, and the small intestines were found to be matted together. He was fortunate enough to be enabled to remove the portion of the intestine in which the fistula existed, and to untie the divided end by means of approximation plates, and so restored the continuity of the bowel, the patient making a good recovery. He also referred to a somewhat similar case reported to him by Dr. Burton, of Liverpool, in which a fæcal fistula existed into the vagina following on hæmatocele. Dr. Burton operated and found the intestines matted together in the pelvis. He, however, was enabled to separate them, and then divided the ileum on the proximal side of the fistula, invaginated the divided ends and fastened the upper portion to the ascending colon by means of approximation discs. This patient made a good recovery. Mr. Jessett then proceeded to give a demonstration of the method of applying the plates, and showed specimens in which union of the intestine had been procured by him in his experiments.

Dr. BANTOCK said he had moved the adjournment of the discussion on a previous occasion more from the desire to give Mr. Jessett an opportunity of eliciting a discussion than for the purpose of offering any remarks of his own, for the subject was one in which he had had no experience. There were, however, one or two points respecting which he would like to

say something. For instance, Mr. Jessett had alluded to the desirability of placing the omentum well over the intestines in order to prevent them contracting adhesions to the wound, in favour of which view he had mentioned that in a number of cases of post-mortem not only the intestines but the omentum, had been found connected to the wound. That, however, was not invariably the case, for he himself had operated a second time in several cases without finding any evidence of such adhesions. When one made a post-mortem examination one was likely to find adhesions between the intestines or the omentum and the wound, but that was a morbid condition, and in the majority of cases that recovered he did not believe that it occurred at all. In cases of ventral or umbilical hernia one always found omentum or something adherent to the hernial sac; that was the result of the pressure. It might also occur when care was not taken to approximate the edges of the peritoneal surface of the wound. How far Mr. Jessett might be right in suggesting that the omentum should always be placed between the intestines and the wound he could not say, but it did not follow that when there was no omentum between that the intestines would necessarily adhere to the wound. Then again, he was not clear in his mind as to the way in which the sutures were to be applied. He had hoped that Mr. Jessett would have made this clearer. Looking at the illustrations he could see quite well how the first three could be tied, but as to the fourth he could not understand how it could be tied without leaving the knot on the peritoneal aspect. He had examined the illustrations carefully, but could make nothing of them so far as this point was concerned.

Dr. BEDFORD FENWICK said the subject was one that Mr. Jessett had made peculiarly his own, and there were few who could speak with authority on the subject besides himself. Some points, however, were of interest to general surgeons. With reference to the point raised by Dr. Bantock as to adhesions between intestines and the wound after abdominal operations, he said that he had seen a good many abdominal

operations in the post-mortem room, and he had been struck with the great frequency of adhesions of the intestines to the abdominal wound. It had always seemed to him that Dr. Bantock's explanation was the correct one—viz., that they were cases in which a large amount of plastic inflammation had taken place giving rise to the adhesions, for in these cases one nearly always found adhesions of the intestines to each other as well as to the parietes. It was not therefore a natural consequence of such operations, but only occurred presumably in cases in which there had been unusual effusion as the result of inflammation. He referred to the cases in which after abdominal operations without any wound of the intestines a fæcal fistula occurred into the vagina. He had an opportunity some years ago of making a post-mortem in a case in which this had occurred, and he found the intestines completely adherent to the abdominal wound, and there was a small fragment of silk suture left in the wound, and he suggested that the irritation set up the abscess in the peritoneum, and that this cavity communicated directly with the opening in the intestine. That seemed to explain the by no means unfrequent cases in which fæcal fistula followed abdominal operations.

Dr. PURCELL said he had been privileged to assist at most of these cases, which were very remarkable and very successful. He was pleased to hear from gynæcological and abdominal surgeons that the accident which the operation was brought forward to overcome was not of frequent occurrence in their practice, but unfortunately in his own line of practice "in cancer of the intestines," which was the condition with which they had most frequently to deal, up to the present time there had been no remedy whatever. Fortunately in cancer of the pylorus, by the method that had been propounded by the author of the paper and by Mr. Senn, they were enabled to form a very good passage between the jejunum and the stomach, and the same method was applicable to cases of cancer of other portions of the intestines. The whole of the diseased portion could be cut away and the disease removed,

the ends of the bowel invaginated and the continuity of the bowel restored by the application of the bone plates. The operation was as simple as it had proved successful. The time occupied in doing the whole operation as proposed was not more than twenty minutes or half an hour. The only thing that was absolutely necessary was to unite the bowel by these four sutures, connecting the two bone plates. Of course, if the portion of the gut was removed then the operation took somewhat longer, but not much. The tying of the four sutures was very simple, the lower one was done first, beginning from below—*i.e.*, they tied the lower one at the lower side of the incision, then the two end ones were tied, and lastly the top one, all of which brought the plates well into apposition. In doing this the fingers of the assistant were of most material assistance, they kept the plates together while the knots were being tied. Having brought them well together and fixed them the operation was virtually over. There remained only the toilette of the peritoneum. No blood, &c., was allowed to pass into the peritoneum. Then they had to close the abdominal wound. Mr. Jessett had brought forward this operation to show that the accident that might take place in any operation on the intestine and after any laparotomy was remediable. He congratulated the author of the paper.

Dr. R. T. SMITH says he had recently seen a case of abdominal section for a supposed ovarian tumour, which however proved to be above the broad ligament. A drainage tube was used, and at the end of three or four weeks faeces were passing through the tube. The question was what could have given rise to this condition, and the abdomen was reopened in order to see. He had followed this second operation with a good deal of interest. After much trouble an opening was found from the bowel into the sac about the size of the little finger. Eventually the case was dealt with by an artificial anus as a temporary expedient. He observed that if the operation brought forward by Mr. Jessett became practicable it would prove a great help in cases of that sort.

Dr. HUGH FENTON said the difficulty that individual members felt in discussing this very able paper and the no less able demonstration was one that would be common to almost every Society in London, for very few fellows could have had an opportunity of seeing cases such as related by the author, and still less of having performed such difficult and dexterous operations. The departure opened out a wide field of promised usefulness in relation to a certain class of cases, and he quite endorsed all that Mr. Jessett had said about that repulsive form of alleviation, artificial anus, in cancer of the bowel. Hitherto they had had no other alternative, if they wished to prolong life, but in many forms of obstruction in the bowel the operation that Mr. Jessett had demonstrated to them that evening could clearly be applied. What applied most of all to gynæcologists was the avoidance and riddance of fæcal fistulæ. Probably everybody who had done many abdominal sections must have found the ultimate success of their cases marred by the formation owing to some accident or another of a fæcal fistula, and must have been at his wits' end to know what to do with it. Three years ago, he had a case at the Chelsea Hospital for Women of a large resonant tumour of the abdomen. Its boundaries were easily defined and he performed abdominal section. The tumour turned out to be the uterus, to the upper end of which a loop of intestine twelve to fifteen inches in length was adherent, and formed part, and parcel of the tumour. It could not be peeled off, so he was unable to remove the tumour without doing such immense injury to the bowel that it was out of the question. He therefore sewed the tumour to the edges of the abdominal wound and made an incision letting out much fluid, fetid gas and pus which had collected in the body of the uterus. The patient did exceedingly well but from that day to this she had been going about with an artificial anus below the umbilicus whereby her life had been rendered burdensome. He now felt that he would be in a position to emancipate the poor woman from the miserable position in which he had perforce left her after saving her life three years ago.

Mr. BOWREMAN JESSETT, in reply, thanked the Fellows for the very kind way in which they had received his paper and for the remarks which they had passed thereon. With regard to Dr. Bantock's and Dr. Fenwick's remarks as to adhesions of the intestines or omentum to the peritoneal surface of the parietal wound, he could only say that in all his experiments, twenty-four in number, only about three died from the effects of the operation. The others were all killed six or eight months later, and in every instance either the intestine or the omentum was adherent to the abdominal wound. There was no morbid condition in any of those cases to account for it, as they never had a bad symptom. That fact had so impressed him that it led him to insist very strongly upon the necessity of putting something between the parietal wound and the intestines to prevent adhesions, and Nature seemed to have provided the omentum for the purpose. He agreed with Dr. Purcell that the assistant was a very important person. It was really by having an assistant who understood what was required of him and who would hold the plates in accurate approximation that one had the best chance of a successful issue. It was easy to see the importance of getting the plates well approximated. With regard to tying the knot of the last threads he pointed out that it was tied between the plates, tying right down so that it drew down the serous membrane. He agreed with Dr. Fenton that his patient, and indeed any patient suffering from fæcal fistula of the small intestine or colon might be easily relieved by cutting down and removing the portion of intestine in which the fistula was situated, invaginating the divided ends and uniting the two portions of intestine by means of approximation plates and securing them in position. He believed that the time would come when an artificial anus, except in cases where the long operation was not permissible on account of the collapsed condition of the patient would be looked upon as a reproach to the surgeon who made it. The cases on which he had operated had hitherto been to a large extent on patients suffering from cancer of the stomach or bowel,

and therefore only temporary relief was given, but in many of these the patients had lived for a considerable time and had been relieved of pain and increased in weight. He had brought the operation forward because there were a large number of people whose cases were curable, people who came in with acute intestinal obstruction. These if seen early enough and if the continuity of the gut could not be restored by the ordinary means of relieving the cause of constriction, might be completely relieved and cured by removing the damaged and obstructed portion of gut. He had laid some stress upon the importance in some cases of making an opening in the lowest point of the constricted portion, because it was always filled with fæces and gas, and as the gas caused great distension if they could not reduce the strangulation, or if the strangulated portion were very congested, approaching the gangrenous state, by uniting the lowest point to another portion of the gut the fæces would pass into it, and the distension being removed the circulation would be restored. The mere distension was often sufficient to cause gangrene by the interference it caused with the circulation.

Dr. BANTOCK asked whether Mr. Jessett had clearly in his mind the difference between a fæcal fistula and an intestinal fistula. The most frequent seat of fæcal fistula was the upper part of the rectum, and he asked how this could be cured by an abdominal operation. Of course intestinal fistula might very well be treated in the manner suggested.

Mr. JESSETT agreed that this was the case, but added that he was, of course, not contemplating operation for fistulæ connected with the rectum.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 26, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 57 Fellows, 24 Visitors.

Dr. AVELING then read the following paper:—

The Midwives' Registration Bill.

MR. PRESIDENT AND GENTLEMEN,—In approaching the discussion of an important subject it is best to begin by considering carefully the general principles upon which it is based—to examine the foundations upon which the superstructure is raised. I would therefore first submit for your consideration three themes.

First: Is the public safety a subject demanding legislative action?

Public safety has been dealt with by Parliament for a very long period. In all cases when the lives of persons are dependent upon the care and competence of others, Acts of Parliament have been passed for the purpose of insuring the possession of a sufficient amount of knowledge and skill by those who undertake vital responsibilities. The necessity of doing this has been so widely accepted and acted upon, that its reasonableness and justice cannot for a moment be questioned. Let us take the example of the transference of passengers across the sea. In this case a number of lives are placed at the mercy of one man. Before he can take upon himself this responsibility, the law determines that he shall first have proved himself to possess a sufficient knowledge of navigation, and shall have received a certificate testifying the fact. It is true he may leave the management of his ship in the hands of

subordinates, but these also must have certificates, and it is their duty, when anything unusual occurs, to immediately seek the aid of the captain. It would be a waste of time to enumerate all the callings in which this wise Act of Legislature is enforced, and I can scarcely imagine the presence in this room of an individual who disputes the wisdom of these protective laws, or who would vote for their repeal. Few people appreciate the amount of life dependent annually upon the competence or incompetence of midwives. The Obstetrical Society of London found, from the result of inquiries, that 60 per cent. of poor women in large manufacturing towns and in the country were attended by midwives. At every confinement a midwife has the care of two lives—the mother and child. If we consider the number of births taking place annually in England and Wales, and remember that half this number are attended by midwives, it will be evident, by adding the numbers of the mothers and babies together, that the total amount of lives each year placed at the mercy of midwives is 900,000. In no other case is so large an amount of life left unprotected by Legislature. If this be so, it may be taken for granted, I think, that my first question “Is the public safety a subject demanding legislative action?” must be answered in the affirmative.

Next I would ask you, “Is the calling of a midwife one which, on the plea of public safety, should be dealt with by Legislature?”

In England and Wales 4,500 women perish annually in childbirth. This mortality shows that one out of every 200 confinements is fatal. I have found that the death-rate among women attended in their confinements by trained midwives, belonging to Lying-in Hospitals, amounts on an average to one in 650, and in one charity to only one in 900. If the deaths in childbirth among women attended by skilled midwives be only one in 600, how is it that the total loss of life amounts to three in 600? We have seen that this mortality does not rest with skilled midwives. The cause of it must therefore be accepted either by the doctors or the untrained

midwives. Can there be any doubt with which of these two bodies the responsibility rests? It must, I fear, be admitted that two-thirds of the deaths taking place outside the practice of trained midwives, are due to want of skill and ignorance. If these figures are, as I believe them to be, approximately true, it is evident that, by the employment of properly-trained midwives, the mortality among women in childbirth might be reduced from 4,500 to 1,500, effecting a saving annually of 3,000 valuable lives. Surely if the public safety is to be cared and provided for by Parliament, here is a condition crying loudly for its interference. The late Registrar-General, Dr. Farr, says in one of his "Annual Reports:" "The excess in the number of deaths from what have been called the accidents of childbearing tells strongly in favour of the efforts that are being made for the education of midwives, by whom so many of the women of England are attended." And he adds, "The law of Nature is that women shall bring forth in 'sorrow,' not in death." But mortality in childbirth does not represent all the misery-making work of ignorant midwives. Hundreds of women who barely escape with their lives, are, from want of skill, rendered useless as workers and wives, and have to pass their existence in continuous discomfort or pain, and not infrequently become helpless burdens upon the parish. My second question, "Is the calling of a midwife one which, on the plea of public safety, should be dealt with by Legislature?" has, I hope, been so placed before you that no other answer, save an affirmative, can suggest itself to your judgments.

My last question is, "Does not humanity prompt the employment of active measures to prevent the death and misery caused by ignorant midwives?"

It is difficult to realise how much heartrending misery the needless annual destruction of 3,000 mothers entails. I have calculated were they to hold each other's hands and stand in row, they would form a line nearly three miles in length. As the deaths of these doomed women occur one by one at various times and in divers places, no particular notice is taken of the hideous mortality. Were all these mothers to die at one

moment and on one spot, how different would be the effect on the general public ! Every three hours, all the year round, one of these mothers is sacrificed to the ignorance of midwives. Think of this ! Surely he must be utterly void of heart and bowels of compassion who, believing it, can say "Let be." Humanity then must, I think all will agree, prompt the employment of active measures to prevent the death and misery caused by ignorant midwives. Those who oppose such measures accept a grave responsibility.

How, then, is the safety of poor women in their confinements to be insured ? By what means are they to be enabled to determine whether the woman called in to render them assistance during labour is a competent midwife ? It can only be effected by Parliament, and by such an Act as "The Amended Midwives' Registration Bill," now under consideration. I admit freely that this Bill is not perfect in all its details, but on all vital points I believe it to be nearly so. It provides for the education, examination, licensing and control of midwives.

There is no country in Europe in which the *education* of midwives is so insufficient and expensive as in England. We want a ready and inexpensive method of instructing women in elementary midwifery. In Austria, Belgium, Russia and Prussia, the instruction of midwives is partly paid for by the State. In Sweden and Norway, the Netherlands and France, it is entirely free. In London the cost is from twenty to twenty-five guineas. Again, on the Continent, the time required for instructing midwives is one or two years. In this country three months are, as a rule, considered sufficient. Are our continental sisters less apt at learning than our own, that a more prolonged period of pupilage is demanded of them, or must we admit that the time allotted for instruction here is far too short ? The Bill leaves the determination of this important question to the General Council, who are to determine the conditions of admission to examinations, the course of study to be pursued previous to examinations, the subject of such examinations, and the general standard to be

attained by women passing the examinations. The General Council has expressed its willingness to deal with this subject, and I know of no body more competent, or whose decisions will be received more willingly. The General Council has also to determine the method, periods and subjects of examinations, and after their rules have been officially published every County Council, or a number of County Councils combining, will have to appoint competent examiners—an arrangement which will enable midwives to be examined within a reasonable distance from the place where they reside.

With regard to the *licensing* of midwives, it may be stated that at present it is impossible for them to obtain legal licenses. They are worse off now than they were 200 years ago, when under the name of "sworn midwives" they were licensed by the bishops. Now certificates of competency are granted by the Obstetrical Society of London, the Lying-in hospitals, and private individuals. These are, of course, of varying values. Besides, what is the work of anyone is the work of no one. The certificate which will be granted under this Bill will be of a fixed standard, and will entitle the midwife to be registered. Both these acts are to be performed by the County Council, but the Privy Council are to make regulations for carrying them out. And now we arrive at the most important clause of the Bill, which provides that unless registered "a person shall not be entitled to take or use the name or title of midwife, or any name, title, addition or description, implying that she is registered under the Act." The infringement of this provision is made penal, and on summary conviction a fine not exceeding five pounds can be inflicted. The next clause also is very important. It provides that "the certificate of registration under the Act shall be a certificate entitling a woman to act as a midwife in cases of natural labour only, *in accordance with the prescribed regulations.*" The full importance of the last few words of this clause has not been appreciated by critics of the Bill. There has been a great deal of discussion as to what meaning should be attached to the words "natural

labour." The definition must rest with the Privy Council, for it will be observed that midwives will have to attend natural labour in accordance with prescribed regulations, and these regulations the Privy Council will have to make and carry into effect.

This brings us to the question of *control*; for midwives, who are convicted of offences against these regulations, may be suspended or have their names erased from the register. It will be seen, therefore, that the effect of the power of control to be exercised by the Privy Council will be to determine and limit the actions of midwives, and will deprive them of the liberty to act as they please, which they now possess. A midwife may now legally perform any obstetric operation and is liable to no punishment unless malpraxis be proved against her. But as the Privy Council has, in the Bill, the power of making rules "regulating any matter directed by this Act to be prescribed," and as a midwife must act "in cases of natural labour only, in accordance with the prescribed regulations," it is evident these rules may be so framed as to prevent midwives performing obstetric operations or dealing with any other cases than those which will be defined as coming under the head of "natural labour."

With regard to existing midwives, it is provided that every woman who, at the passing of the Act, is *bonâ fide* acting as a midwife, or has served as a pupil midwife in some hospital, shall, on the production of the prescribed evidence, be entitled to be entered in the midwives' register. When any Act is passed existing interests and privileges are always respected. The Apothecaries Act was not made retrospective, as the following provision in it proves: "From and after the first day of August, 1815, it shall not be lawful for any persons (except persons already in practice as such) to practise as an apothecary." It has been stated that the clause under consideration will flood the country with ignorant Gamps, but it does no such thing. The Bill does not create a flood of ignorant Gamps, for they already exist. There is no new importation. On the contrary, the effect of the Bill

will be to diminish the number of women now following the calling, for many, from age and other reasons, will not apply to be registered and will consequently cease to act.

The Bill will, therefore, cause a diminution of the number of midwives at present practising. It will also reduce the number who will practise in the future, for it will be more difficult for women to adopt the calling on account of the necessary preliminary expenditure of time and money which will be required. In fact, it has been feared by some that the reduction will be too great. Where there is a legitimate demand it is not fair to remove the accustomed supply without substituting some alternative method of obtaining the commodity. The wants of society, if not law, sanction the existence of midwives, and no act of Legislature ought to curtail their usefulness, or cause their numbers to be inconveniently small.

In reviewing the Bill I have already answered many of the objections urged against it. There are many more which I have not dealt with. They are, for the most part, founded upon an imperfect knowledge or misapprehension of the Bill, and I have no doubt you will hear enough of them presently.

The existence of midwives is simply one of supply and demand. The attendance of a medical man at a confinement demands also the presence of a monthly nurse. He cannot wash and dress the baby and do what is necessary for the mother. The midwife combines both these offices, and hence to the poor her existence is a necessity. Midwives have always been, and they are not likely to cease to exist while necessitous women bear children. At Birmingham I asked the question, "Are midwives to be abolished or bettered?" No one, as far as I am aware, has answered the question by proposing the former alternative.

Passing over the minor objections, which time does not permit me to consider, I will now draw your attention to what I believe to be the master objection, for, like Aaron's rod, it eats up all the others. That which has most weight with the general practitioner is one of shillings and pence,

with the pounds left out. It is said that the Bill will impoverish the pocket of the profession. Everyone who has followed me thus far must see that the result will be just the opposite. If midwives are reduced in number there must be more work for the doctor. If midwives are limited in their action he must more frequently be called in. I began practice in a Yorkshire mining village, and I know what ten-shilling midwifery is. I have attended 126 cases in a year, and have no hesitation in saying that a general practitioner is better without such patients. It robs him of his night's rest, unfits him for his work in the day, leads to the use of stimulants, and places him for weary hours in abodes which are often comfortless, or still worse; and in the presence of persons socially uncongenial or even offensive. An intelligent midwife is a great boon to the doctor. She relieves him of disagreeable and unremunerative work, and can be used to watch cases for him and save him much valuable time by preventing him being sent for unnecessarily early. The fees she gets for attending cases, varying from two-and-sixpence to ten shillings, are contemptible pay for the services of an educated gentleman, and the only valid reasons for his attending such cases are charity or the attainment of experience.

The threatened impoverishment of the profession is to be effected, we are told, in the following way, and I quote the writer's words:—"This Bill proposes to construct a new order of midwifery practitioners, who shall be co-equal with doctors in so far as midwifery is concerned." Another writer goes as far as to say that midwives will be placed on the Medical Register. These statements, if true, would most certainly arouse the opposition of the whole profession; and it can be well understood how general practitioners, who have not read the Bill and believe these misleading and groundless assertions, are being persuaded to oppose the registration of midwives. But these assertions are not true. The Bill does not construct a new order of midwifery practitioners. When medical men were registered it did not create a new class. It simply enabled the public to know whether a

person assuming a medical title had a right to it. It will be the same with midwives. No new class is created. Again, the writer I have quoted not only says that a new order of midwifery practitioners is to be constructed, but that they will be co-equal with doctors in so far as midwifery is concerned. It is impossible to believe how anyone who has read the Bill, unless he be blinded by Quixotic enthusiasm, could pen these words. If midwives were made co-equal with doctors in one division of the profession, they would have equal privileges in all, and have a right to be placed on the Medical Register. It can scarcely be necessary to remind you that midwives will have a special register of their own.

In dealing generally with the objections to the Bill, let us notice from whence the opposition has *not* come. The medical corporations, whose duty it is to see that the interests of their members are not interfered with, have made no sign. They only say that it is not their province to license midwives. No large medical society has protested. The Obstetrical Society of London, which has more especially the interests of obstetric practitioners at heart, does not object—in fact, it was the first to take up the subject, and by establishing examinations for midwives give positive proof that they believe the existence of ignorant midwives to be an evil which ought to be remedied. It is useless to say that the Council alone have acted in this matter. The proceedings of the Council and of the Board of Examiners have been read at the annual meetings, and no voice of protest has, to my knowledge, ever been raised against the excellent work the Society has done in this matter. The largest medical society in this country, the British Medical Association, has taken a most active part in the efforts which have been made to regulate the practice of midwives; and this has not been solely the work of the Parliamentary Bills Committee. In 1873 I brought the subject before a large general meeting of the Metropolitan branch, and at the conclusion of my paper the following resolution was carried:—"That the General Council be requested to appoint a Midwifery Committee to enquire

into and report upon the best means of instructing and registering midwives." From this time the Association continued to take an interest in the subject, and in 1883 a Bill was drafted by the Parliamentary Bills Committee, and a copy of it was sent to each branch for its opinion upon it. From every branch (except Liverpool, I believe) no answer, or an approving one, was received. From the editors of the medical press there have been no adverse remarks; on the contrary, in the strongest and most convincing language, all have endeavoured to forward legislation for midwives. The General Medical Council does not oppose. It has frequently considered the subject, and its latest words were, that the absence of public provision for the education and supervision of midwives is productive of a large amount of grave suffering and fatal disease among the poorer classes, and that public safety demands from Government the passing into law of some measures to enforce the education, licensing and registration of midwives. There has been no opposition from Government. Many times I have been with deputations to the Lord President about midwives and we have always received the same answer:—"The education and registration of midwives seems to us desirable and necessary, and we will do all we can to forward your views." Then at the end of the Session came regularly a letter saying that for want of time it was found impossible to deal with the subject. But more important than all is the fact that no opposition is raised by those most concerned—the midwives. It was they who first commenced the movement, and this is a happy omen, for all successful reformations have begun from within. I look upon the desire of midwives to have their practice legally regulated as a sure sign the proposed Bill is sound in principle and will certainly, sooner or later, pass.

During all the years we have been working for the amelioration of midwives, we have, until lately, lacked the healthy stimulus of opposition. Now we fortunately have it, and to those gentlemen who favour us with it we owe a deep debt of gratitude. I would ask them to state candidly

whether their adverse criticisms are intended to amend or destroy the Bill? If to amend, I hope their minutest objections will receive respectful and most careful attention. If to destroy, I would beg of them to leave its details alone and attack the main principles underlying the Bill. A tree cannot be felled by hacking at its twigs; the process only prunes it and increases its strength and vitality.

I now beg to hand you, sir, the following resolution, which, with your permission, I will propose :—

"That public safety and humanity demand legislative action to enable poor women to know whether midwives are safely competent or dangerously ignorant."

Dr. ROBERT BARNES in seconding the motion, observed that Dr. Aveling was the first to insist upon the movement, and he had since promoted the cause with great steadiness of purpose and judgment. He approved most heartily of the words in which he had summed up the question, viz., that the midwives must be abolished or improved. That was really the issue that was before them. Abolish them they could not, and if not brought under some kind of supervision and made to submit to examination and registration, the proportion of ignorant midwives would increase instead of decreasing. What they must do was to endeavour to put them upon a better basis. His own experience had not been in the same field as that of Dr. Aveling. He had, however, had large opportunities for observation. First as a young man as house surgeon in a lying-in hospital, and he could endorse entirely what Dr. Aveling had said. Since then he had been fifteen years physician to the Royal Maternity Charity, under which all the women were attended by trained midwives. In that charity the mortality was about 1 in 600, and he knew of no department of midwifery practice that could exceed these good results. In the first place the women were trained to recognise natural labour and to know when to send for assistance. He pointed out that when they were trained and brought into harmony with medical men they felt confidence in consulting with them. To turn to another kind of practice

where the women free of all responsibility and training, acted in a loose uncontrolled fashion ; these were the women who went wrong, for they were just the persons not to call in a medical man, owing to there being a sort of antagonism. If women were to be protected in their labour they must be placed in the hands of competent midwives who were registered and felt a certain responsibility. That was one great argument in favour of legislation. Apart from responsible practice there was facility for procuring easy abortions and other dangerous practices being carried on in the dark. So far as he had seen the objections were based upon erroneous facts and illogical deductions. In Germany and other parts of the Continent the women were trained and felt their responsibility, and they applied to a physician as soon as anything went wrong. They were not allowed to use the forceps, and that would have to be provided against here. It had been urged that there was a superabundance of medical men in England, and that if the cases were distributed there would be about twelve labours each ; but a very large number of these did not attend midwifery at all, and many others did very little, so that the average number falling to those who practised was much more than twelve. A large number of women were attended in workhouses under the supervision of the parish medical officer. The women employed there were often very well trained, and some of them ultimately went into private practice. He insisted upon the fact that the midwife did nothing but midwifery, and no doctor could possibly do what they did. He had known midwives to attend twenty cases in a week or more, and if anything went wrong, if they had a succession of bad cases, it was very soon found out and they were stopped from practising for a time. One knew, at any rate, what was going on, but in the other case of irresponsible midwives nothing transpired and the avoidable mortality was allowed to go on unchecked. There was one thing that ought not to be passed over, and he was glad to see Members of Parliament there who might take it up. That was the registration of still births. He would not enter upon a discus-

sion as to the limit of age, but he presumed that all viable children ought, at any rate, to be registered. Another objection was that there would not be enough parturient women left to carry out the training of students, but he said that if the available means were resorted to there would be plenty of opportunities.

Dr. MANSELL MOULLIN said :—The Society is to be congratulated on having taken to-night a new and happy departure. In the Council of another leading Society this Midwives' Bill has been quietly debated and approved without consulting in the smallest measure the Fellows of that Society. Dr. Aveling tells us that some notice of it was taken at the Annual General Meeting. Considering what reports read at annual meetings are, he can hardly call this a satisfactory measure of confidence in, or consultation with, the general body of the Society. We, recognising the proposed legislation as one which will have far-reaching effects on general practitioners, have issued a general invitation, and are ready to give every one a courteous hearing for the common weal.

We have heard from two distinguished Fellows of this Society a few reasons for the adoption of this Bill. In due form I beg briefly to put the opposite side of the question, and to move the following amendment to the resolution now before the Society :—"That this meeting, while considering there is great need for improvement in the education of midwives, sees no necessity for Parliamentary action, and believes that the Amended Midwives' Bill, now proposed to be again introduced into the House of Commons, is a measure fraught with danger to the public, useless to the midwives themselves, and most detrimental to medical men."

To take these points *seriatim*, I presume there will be no difference of opinion that, if there are to be midwives, those who practise as such should be acquainted with the difficulties and dangers of their vocation. Great advances have undeniably been made in this respect in the last few years, and the tendency of improvement is to beget improvement. I

would urge that if the various bodies and societies, scientific and philanthropic, which are at present at work, be only permitted to continue their course, a continued improvement in the *personale* of midwives, and in their education and practice, will inevitably result.

I pass on to contend, as strongly as I can, that no shadow of a case has been made out for asking for Parliamentary powers to hasten this desirable development. Dr. Aveling has given certain figures, which he believes to be "approximately correct," as his justification, and sole justification, for demanding the passage of the Midwives' Bill. Dr. Aveling has worked at the subject for many years, so that if he had any arguments beyond these figures he would doubtless have advanced them. I shall endeavour briefly to demonstrate the value of these figures. He begins by asserting that the "probable number of women acting as midwives in England and Wales is from 10,000 to 15,000"—rather a wide margin to commence with. Now what is Dr. Aveling's authority for those figures? The Registrar-General reports, in the census for 1881, only 3,000 midwives. My own impression, from knowledge of several localities, is that midwives are diminishing in number, while progressing in education. But anyhow we have a right to ask Dr. Aveling for his authority for his assertion that in the last ten years midwives have multiplied in number five-fold. Next he would have us believe that midwives attend 60 per cent. of the confinements in this country. Where is the proof, I should like to know, of such an astounding assertion? But let us test his figures by the one specimen of arithmetic which Dr. Aveling gives us. In last week's *British Medical Journal*, p. 1173, Dr. Aveling's paper read at Birmingham contains these statements: "The number of births per annum is 900,000, of this number midwives attend 60 per cent., that is 540,000; of the total number of women confined 4,500 die each year in childbirth, that is, two out of every 100." Now if you will work out this little sum correctly, you will see that the result is not two in 100, but 1 in 200—a very different result indeed. Presumably,

however, this is a printer's error, but seeing how intensely misleading it is I can only regret that Dr. Aveling did not correct his proofs. Then he says, "The deaths of women in childbed who are attended by "skilled midwives and medical men amount to only one in 600." Such an estimate is totally opposed to the published figures of all institutions, both at home and on the Continent. He continues, "In unskilled hands these mothers die at the rate of three in 600," and a very good average, too! At any rate three in 600 or one in 200 is no worse than, but exactly the same as, the corrected average for the whole number, taking Dr. Aveling's own figures. How these figures are obtained is of course a detail. How a skilled midwife is to be distinguished from an unskilled one, not having as yet been labelled with the Government stamp, or whether in the case of a midwife in difficulty calling in a medical man, the death is to be accredited to the ignorant midwife or the skilled medical man, are trifles upon which Dr. Aveling vouchsafes no information. Suffice it to say, briefly, that with the collapse of his statistics the whole of Dr. Aveling's arguments fall to the ground.

I would now turn to the last paragraph of the amendment and briefly show that this precious Midwives' Bill would be dangerous to the public. In the event of its passing, who is to supervise and control the whole business? The Bill calls upon the General Medical Council, which notoriously cannot get through its own work, to undertake that most difficult of tasks—the oversight of a new and entirely experimental departure. It may be taken for granted that the General Medical Council would politely but firmly decline to take any such part in the scheme, and I am advised that it could not be legally compelled to do so. The Bill recognises this, for it proceeds to give the Privy Council the power to formulate the rules. Who would advise the Privy Council? Surely, of course, those who have instigated the whole movement, those who introduced the first Bill last session, which even their warmest supporters admitted to be "an utterly bad Bill," those who ordained that anyone who had been in a lying-in

hospital for three months might be registered, though every clause affecting this point has been ingeniously removed from the amended Bill. The Privy Council—that is to say, two or three elderly courtiers being the ruling spirits—hands the matter over to the County Councils, who have to take action. As no date is fixed, some councils will probably postpone such action until the Greek Kalends. But the idea is superbly grotesque, that these bodies of local laymen are to be the controlling authorities for the new order of midwives—are, in fact, to take them over with the charge of the gas, the water and the sewage of their district. How these worthy shopkeepers and country squires are to control a demi-semi professional body like midwives is one of the mysteries the Bill does not solve. But it does not require much proof to show that if a body of women, many of whom are without the slightest pretensions to education, and drawn from the lower strata of society, is to be placed on a footing with medical men and invested with a definite legal status and corresponding rights and privileges—at the same time there being no proper system of control—a wide field will be opened for nefarious practices of every description, and the public will be the sufferers. The acme of absurdity is reached when it is proposed to throw upon these estimable laymen the task of deciding in any given case whether a labour has been natural or otherwise.

Again, the Midwives' Bill, if passed, would be useless, or worse than useless, to the midwives themselves. As things stand at present the midwife enjoys a small local reputation, and the public employs her services knowing full well that they are to be obtained at a lower price and are inferior to those of a medical man. As soon as the function of midwife is magnified in importance by the possession of a state licence and registration a rush of women will at once take place into this apparently new field of labour. Competition will follow with its inevitable consequences. Neither will there be any protection for those who are registered under the Act, for the very good reason that all the penal clauses

providing for this will practically become dead letters. What is everybody's business is nobody's business, and the Bill carefully provides Clause 16, Section 2, that any prosecution under the Act may be instituted by a County Council or a Borough Council or a Board of Guardians, but carefully deters a private person from moving in the matter.

As to the detriment arising to medical men from the passing of such a Bill, probably there are many in this room who can speak from personal experience. Leaving them to do so I now formally move the amendment to Dr. Aveling's resolution, which I have read.

Dr. RENTOUL criticised the details of the Bill. He observed that Clause 2 is absolutely worthless. The General Medical Council is given the power to draw up rules, but it is given no power to enforce them. Under the Medical Act the Council can enforce its mandates by refusing registration, but under this clause the rules that it might make would be worthless. A clause should be introduced, stating—"Such rules shall be, when so approved, of like force and effect as if they had been enacted in this Act." In reference to Sub-clause 3, thirty days' notice had to be given of such rules, but he thought that three months would be better. Clause 3 gives the County Councils in England and Wales the power to appoint "competent examiners," conduct examinations, grant certificates, and publish County Registers. But he pointed out that there were fifty-two counties in England, and every town of over 50,000 inhabitants was, by the Local Government Act of 1888, constituted a county for administrative purposes. That would give a total of about 113 examining bodies. The whole tendency of medical education in the United Kingdom was in favour of the one portal system, and this move is strangely at variance with it. There would be, in addition, at least thirty-two examining bodies in Ireland and thirty-one in Scotland. Then, again, under this clause there is no provision for recognising hospitals and other bodies at present engaged in training midwives. He asked whether power would be given to such in-

stitutions to continue to do so and to register their certificates. The question arose as to whether a legally qualified practitioner could take a midwife as his qualified assistant in midwifery. It had been answered in the affirmative, and he thought that a clause might be introduced to prevent it. There were 52 lying-in hospitals in the United Kingdom, and many of them trained nurses and gave them certificates, and there are over a hundred poor-law infirmaries — so that altogether there would be upwards of 325 Examining Bodies in the United Kingdom!

Dr. AVELING pointed out that this view was based on a mis-apprehension, for power had been reserved for two or more County Councils to join for the purpose of examination and registration.

Dr. RENTOUL said that was so, but they would not unite for the purpose, as the Medical Council or Privy Council had not the power to make them do so. In Lancashire alone there would be fifteen examining bodies. No power was given under this clause to stop those County Councils examining on its being shown that their examinations were not conducted with efficiency. Under the Medical Act any default in this respect with regard to medical examining bodies could be enforced by refusing to register their diplomas. He thought this power ought to be introduced. Again, although each County Council was given the power to examine and grant certificates, the County Council is not given the slightest power over the conduct and practice of midwives. The Universities and Colleges have power over their graduates, and can take their degrees from them; yet with the midwives no supervision whatever is provided for. This is a most important defect, and should be remedied. It may be said that the Privy Council has the power. But will the Privy Council act? In reference to Clause 4, under which the Privy Council was empowered to make and enforce regulations, he pointed out that if, as was intended, the General Medical Council was appointed to supervise the working of this Act, it must be borne in mind that the Council had re-

fused once for all to have anything to do with the working of the Act, and that was the strongest argument against the Bill. It would, under any circumstances, be very difficult for any body to supervise the examining boards. Then there was no reference to any plan of paying the gentlemen who would be appointed to supervise the examinations, or, for that matter, the payment of the examiners, and they could hardly be expected to work for nothing. It would be unfair to place not only the examinations or the supervision of them on the Medical Officers of Health, who had even now too much work. Clause 5 patented the "title" of midwife, but he asserted that there was no need for this. All that was necessary was to define the duties of the midwife. The clause did not seek to prevent persons practising midwifery who were unqualified. In fact, it said this—any woman can practise midwifery as long as she does not call herself "midwife." A clause similar to Section 20 of the Apothecaries' Act should be introduced, viz. :—"That if any person practise midwifery for purposes of gain without being registered, such person shall be fined not more than £20." Clause 6 is very important, especially when taken along with Clause 8. It places Scotland and Ireland under a different law. It meant that English midwives could go to Ireland or Scotland to practise, but Scottish and Irish midwives could not come over here to practise, and if they did they would be fined. Why deny poor lying-in women in Scotland and Ireland the suggested benefits of the Act! In Clause 8 the word "may" was introduced, and in an Act of Parliament it should always be noted that "may" means "shall not." In Clause 6 it is stated that a midwife is to "conduct natural labour only, and in accordance with the prescribed regulations." What "prescribed regulations"? No one is appointed in the Bill to draw them up, and if they were drawn up, could an obedience to them be enforced? What, again, is a "natural labour"? Are foot, knee, breech, face and brow, "natural labours"? Again, what is the use of defining her duties, when no penalty is imposed if the midwife conducts "unnatural" labours?

Why not introduce a clause stating that if a midwife conduct unnatural labours, as defined by the General Medical Council, or perform any obstetric operation, she shall be fined not more than £20. Clause 7 says that forty shillings *may* be charged for examining a midwife, and five shillings for registration. By this clause she can be examined and registered *free* of any expense whatever to herself. Under Clause 9 two classes of women are to be registered: (a) those acting as *bond-fide* midwives, and (b) those who enter as "pupil midwives" and register within eighteen months of the passing of the Act. That provision would certainly lead to a rush, and it was quite without a precedent. The Medical Act of 1858, which established our Medical Register, ordered that two classes of practitioners should be registered: (a) those who had been in practice prior to 1815, and (b) those who were qualified on or after the passing of the Act. The latter had all to produce their degree or diploma. The former had only to sign a statement that they were in practice "prior to 1815." Hence the occurrence of this statement in the Medical Register of 1859 after the name of a few men. Practically those registered without having a degree or diploma were very few indeed, as such must have been, on the passing of the Act, about sixty-four years of age. But in this Bill it is proposed to place 15,000 old women on the register without any examination whatever, and on the condition that they can pay not more than thirty pence for their diploma. Not only so, but about 9,000 or more women can be registered if they are cute enough to become "pupil midwives." I ask, how will such registration protect "poor lying-in women"? Will the Government stamp in this case not be truly deceptive?

Then in regard to prosecutions for infringements. Under the Medical Act anyone, with the consent of the General Medical Council, or of a branch council or medical corporation, could initiate proceedings, but in this Bill, "no private person" could institute proceedings except with the consent of the Attorney General or County Council. How could a mechanic leave his work, or pay for stating a case before

a County Council? The clause was meant to place midwives beyond the power of those who would employ them. Dr. Rentoul called attention to the necessity for the registration of still-born children. He had inquired in his neighbourhood, and found that no less than 483 had been interred at eight cemeteries in and about Liverpool in twelve months. How many had been burned, put in the dust hole, or otherwise disposed of throughout England he had no means of knowing—probably 15,000 at least. He certainly thought they ought to introduce a clause requiring that a post-mortem examination be made on all still-born children before they were interred, and that they be interred only on an order from the coroner after he had ordered the official examination. At present no doctor's certificate was necessary. In such cases there were no funeral expenses, no clergymen's fees, and there was, in fact, every inducement to declare children to be still-born who were really born alive and had lived for some hours or days. The English law, indeed, absolutely forbade the registration of still-born children, and any person could at present grant "a certificate" stating that it was still-born. Such was accepted by the registrar of the cemetery—a most undesirable method, and one very likely to lead to most serious abuses.

My main objections to such a Bill are (*a*) that no person can efficiently practise midwifery unless he or she has had a complete training in medicine and surgery, and (*b*) that the medical schools have not a sufficient number of lying-in-cases at their disposal for the efficient training of both medical students and pupil midwives in midwifery. To train 1,733 students we require at least 51,990 cases (thirty for each). At fifty-three of our hospitals in 1889, 50,173 confinements took place. These figures, I trust, show that we have not any cases to spare. Therefore let us perfect the education of the medical student before we attempt to lessen the opportunities of his training.

Mr. FELL PEASE, M.P., explained how he had been induced to back the Bill. It had been pointed out to him by lady friends that it was necessary for midwives to be re-

gistered in order to obtain some guarantee of their efficiency and Dr. Aveling had hit the right nail on the head in speaking of the public safety. That, of course, for non-professional men like himself was the reason for their having anything to do with the Bill. It was for the purpose of helping to save the lives of women and children at times when ignorance might expose them to the most serious dangers. Their great object was to achieve this as simply as possible, and consequently they had brought in the Bill which some of those present seemed to think was unnecessary. He had before him the draft of a Bill drawn up by the British Medical Association. The Council of the Obstetrical Society had endorsed the Bill. The Government from time to time had felt that this question ought to be dealt with, and they had had the assistance of several members of the present Government who had shown them the drafts of the Bills that had been introduced heretofore. When the Bill was referred to a Select Committee they had the advantage of all the Bills that had been framed before. Of course it was exceedingly difficult to meet the views of everyone, because there were such differences of opinion, and no doubt the opposition to the Bill arose from very different motives. He was glad to find that Dr. Rentoul's opposition was not against the Bill as a whole. He began by knocking off some of the twigs without going to the root of the tree. He said they wished to gain all the information they could as to the feelings of professional men in relation thereto. It was a subject upon which they must know much more than a non-professional man could. His object in coming to the meeting that evening was to gain, not to impart, information. His only object was the general good and the public safety. Knowing how much damage, how much suffering was caused by ignorant people at these critical moments, they were endeavouring to raise the standard of proficiency, and they had no idea that it could in the slightest degree interfere with the interests of the medical profession. They had always been told that in endeavouring to raise that standard, the midwives would learn the extent of

their own ignorance, and he had heard of instances in other branches of the profession, and in other professions in which this had certainly been the case. Therefore in instructing these untaught women their duty they would the more readily avail themselves of the assistance of medical men than they would otherwise do. At present some of the women might think it rather below their dignity to send for the doctor, but when they had learned the difficulties and the dangers of the situation that feeling would no longer obtain. The objections that had been raised to various points would be better answered by Dr. Aveling and by his colleagues. There was the question as to what was a natural labour and what unnatural—that, of course, members of Parliament could not be expected to know anything about, but that would be left to the General Medical Council. (Dr. RENTOUL: Their definition would not be binding.) They must remember that Acts of Parliament were passed by men who were not specialists, and no Act was likely therefore to meet every case, but if they referred to those who might be supposed to know all about it, then that ought to meet all objections. He was very pleased to come there and hear what their objections were.

Dr. FARQUHARSON, M.P., said they had come prepared to listen to a very interesting discussion, and Dr. Aveling had carried conviction to his mind. The public safety was the key-note of their action; it pointed out that midwives were practising all over the country quite unrestricted, and as they could not stop them, the object of legislation was to regulate what it could not prevent. If they adopted this principle, then he thought that all the details became simple matters for discussion. Their minds were quite open as to the details, and they would gladly receive any assistance from gentlemen present there that evening or others. He did not think that there was very much chance of passing the Bill that session, though he hoped it would ultimately become law. Dr. Rentoul had devoted himself with considerable energy and ability to the consideration of the details, and if he would embody in writing his objections and suggestions

they would at all times receive the most cordial and respectful consideration. They had thought it better not to lay down any elaborate code with respect to natural labour, &c., which was better left to the General Medical Council. They had been told that the Council had no power to do this, but the Council had not questioned its capacity to fulfil the duty which it was proposed to lay upon it in regard to framing the regulations. He had no doubt they had acted under legal advice in the matter, and knew what they were about. Then as to carrying out these regulations, it had been said that the Council had no power to enforce them when made, but he pointed out that it had at its back the Privy Council, which would give their regulations the effect of law and enforce penalties against midwives who did not conform to the law. He did not speak as a lawyer, but he imagined that the General Medical Council, with the Privy Council at its back, would have full power to enforce its regulations legally. He pointed out that it was necessary to provide for the administration of the law, and they had selected the County Councils. These were composed of men of business who were fully able to carry out practical matters, and would be perfectly able to fulfil practical duties of the kind alluded to. He had listened with a great interest to the discussion, and he thought they would derive some valuable hints for improving the Bill.

Mr. RATHBONE, M.P., said they were anxious to obtain the opinion of the medical bodies in respect of the Bill. He explained that they were asked to attend the meeting of the Parliamentary Committee of the British Medical Association, and he was very glad to have had the opportunity of putting into a practical form any suggestions which might appear desirable to that Committee. He had therefore asked the Government draughtsman who had drawn up the Bill to come with them, and he had done so. He was, moreover, delighted to see that the Committee had taken the same precaution. He only regretted that Dr. Rentoul did not put in an appearance on that occasion, and that he did not in the presence of these two lawyers make his criticisms, for they

might then and there have been cast into a practical form. Whatever Dr. Rentoul's talent might be—and he was sure it was considerable—he would be disposed to rely more upon the legal opinion of these two gentlemen as to practical affairs in reference to an Act of Parliament than upon his own or Dr. Rentoul's. He thought that Dr. Rentoul was quite mistaken as to the practical consequences, and he was afraid that he did not look upon the Bill from a favourable point of view. Indeed, from what he had said Dr. Rentoul seemed to think that midwives were not a good institution at all, and that labour cases ought to be left to nurses and medical practitioners. That was unfortunate, but this idea was, he thought, impracticable. Their object was to improve the condition of these midwives, and what these midwives wanted was a greater amount of skill. It was not their object to restrict them in any way. As to the general principles of the Bill, he pointed out that in such matters there must be two sets of functions—one that belonged to them as legislators, and the other in regard to the administration. These two sets of functions were always, and wisely, kept separate in this country. The House of Commons was not a good body for drawing up the practical details of a measure like this. They could know nothing about natural labour, and they therefore sought out the best body they could find who would have that practical knowledge which they themselves did not possess. It had been suggested that perhaps a more representative body than the General Medical Council might be better, and the draughtsmen put their heads together to form such a representative body, but when they came to attempt the work it was found to be practically impossible, so the attempt had to be abandoned. They had therefore fallen back upon the General Medical Council to draw up the details. This plan would have the advantage that these rules could be altered from time to time as might seem necessary without coming to that technically ignorant body, the House of Commons. It would be a full year before the rules came into operation, and that would afford ample

time for this Society, or any other, to lay before the Medical Council what would be the best arrangements to make. Coming from such a body as this Society, their suggestions would naturally receive careful and intelligent appreciation. Surely it must be possible in this way to draw up a much better set of rules than could be done in any other way. That was the state of affairs. He would ask them to consider the question as one that must be dealt with either by them or by the Government. They had been most anxious to safeguard, as far as possible, the legitimate rights of the medical profession, and he thought that Dr. Rentoul did not appreciate the advantage of some of these provisions which they had had considerable trouble to adhere to. It was said, Why should you forbid these poor women to adopt the title of midwife? but the answer was that if the word could be used by unqualified persons, then the public would suppose that they were registered. Instead of opposing this Bill and throwing them to the end of a Session, it would have been far preferable to let it go at once to a second reading, for in that way they could make a much better Bill of it than they could by their own unaided resources. Many inaccurate impressions had got abroad, and they rendered it very difficult for them to introduce the improvements they would like, or to carry out the practical suggestions of the profession, to which they would otherwise be delighted to listen. He assured them that they were painfully aware of their own ignorance, but they did their best to get the requisite information.

Mr. PRITCHARD MORGAN, M.P., said he came to receive, and not to impart, information. He had not seen the Bill until yesterday, and in looking over it he observed that there were two or three matters to which those in charge of the Bill would probably give their attention. For instance, there was power given to the County Council to appoint one board of examiners, but in London it would be necessary to have a much greater number for such a large district. There were other details of this kind, upon which he would not then insist. It was proverbially easy to drive a coach and four

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through an Act of Parliament, and through a Bill it was easy to drive a team of bullocks or anything else they chose. The question, however, that would ultimately have to be considered by the House of Commons was this: Ought midwives to exist at all, and if so, ought they to be put under some kind of supervision? That was the crux of the whole question. The details of the Bill would be dealt with by-and-bye, but after it had passed through the House of Commons it would probably be a much more imperfect piece of machinery than it was in its present form. A certain learned judge had once said that to present a perfect Bill to the House of Commons was like presenting a new watch to a boy. The boy takes out one or two wheels and then the watch would not go at all. It was just so with the House of Commons. They took out this clause and that clause, and then the Bill became altogether unworkable. That, however, could not be helped; but if midwives were to exist in England they ought at any rate to be controlled to the extent of giving them a hall mark whereby the general public, and poor women in particular, might be protected against ignorant persons, and not be imposed upon when they could not afford to pay for the services of a medical man. In conclusion, he said that he should be very glad to render the Bill every assistance in his power when it was brought before the House.

Sir WALTER FOSTER then said, that in the first place he ought to clear up one point which had just been brought to his notice by Dr. Macnaughton Jones with reference to the attitude of the General Medical Council. The Council had passed a resolution which was very favourable to the promotion of legislation. The Council in passing that resolution felt, and made it understood that they could not undertake the administration of any Act of this kind, in the way that they administered the Medical Acts, as it would add enormously to their labours, and the time at their disposal was limited. Nevertheless they would give all the assistance in their power in drawing up rules, and discharging the functions contemplated by the Bill. It would be the duty of the

Privy Council to see that the regulations were binding. That could even be made more clear in the draft Bill. He did not wish to enter into a discussion about the details of the Bill. He had put his name on the back of the Bill last session; and it had added another terror to life. He had not done so on this occasion, for with his many professional and parliamentary occupations, he could not bear the additional strain thrown upon him. No one would believe the worry that this particular Bill had caused him, and he was not inclined to repeat the experience. With reference to the Bill however there were two or three points calling for notice. First of all in reference to the public safety. He himself had seen some terrible instances of the results of ignorance on the part of midwives, which had brought death and desolation into families, and this he wanted to try and prevent by providing, that in future only properly trained midwives should have the right to occupy these responsible positions. He thought they were all agreed as to this. He did not think that any medical man would allow sordid interests to interfere with such a movement. Last year the Bill was not allowed to pass, but he did not think they would get as good a Bill in the future as that one. He had endeavoured to improve the Bill, and the select Committee had a good deal of labour over it, that was not "natural," but really "difficult" labour. He had been animated by the view that it would do good to the medical profession. He was positively pained to hear of medical men taking ten shillings and less for a case of midwifery. He contended that such a practice did harm to the profession and to the public. If they wished to elevate the profession to its proper level, it would not be by conferring titular distinctions upon this or that Court Physician. It was not by raising the social status of the leaders, but by raising the humblest members of the profession that they would really elevate the medical body, and one way to effect this would be by relieving them of the necessity of attending midwifery at ten shillings. He wanted to do away with that and to introduce a class of persons who should do this work

under their supervision, and with proper restrictions. He hoped therefore when this Bill appeared in the House of Commons with whatever modifications might be suggested, that it would have the general support of the profession. If that were the case the Bill would have a fairer chance of running through the House. They must remember that no small amount of opposition came from the midwives themselves, and there were many members of the House of Commons who resented any interference with "the liberty of the subject," and who on that ground would offer opposition to the Bill. He did not believe, if the Bill were passed, that it would injuriously affect the pecuniary interests of the profession, but rather that it would elevate the profession as a whole and would relieve them of a great deal of ill-paid work. Dr. Rentoul said there would be 113 licensing bodies, and he had alluded to the advantages of the one portal system. He might assure him, however, that the one portal system was as dead as Moses. He himself had fought for it for years, but the Medical Act of 1886 had killed it, at any rate for a long time to come. But there were even now, Dr. Rentoul said, 150 places where midwives received certificates—113 would be better than that. In any case he had great confidence in the County Councils. They must remember that these bodies were going to be most important bodies in the country. They would in the future appoint Medical Officers of Health to act as their medical advisers, and there would be a special department of health. These officers would control the sanitary work in their respective areas, and advise the Council on all medical matters. If the Government entrusted these bodies to perform all the responsible duties that had been cast on them, surely they might be made good enough to look after these particular duties as regards midwives, especially when they had skilled medical officers to help them. He did not care how stringent the rules were made. There would be a central body to supervise all that. He would only appeal to them not to weight the Bill with too many provisions in favour of the profession, for there was a very strong feeling in the House against such proposals.

Dr. CHAPMAN GRIGG insisted upon the injustice and cruelty of opposing such a Bill. It was far in advance of any preceding Bill on the subject. The first Bill of the kind had received almost the unanimous support of the profession, yet that Bill gave them no power and no control whatever over the curriculum or training of these women before presenting themselves for examination. It provided simply a machine for examining women. Dr. Grigg had introduced this part of the Bill. He pointed out that the present system was most disgraceful and highly unsatisfactory. He was in a position to know something about the matter. He trained yearly numbers of women who went up to the Obstetrical Society for examination. That Society was doing a good work in inducing these women to qualify, but with that they must not rest contented. At present there was no power to control the period of study or the training of these women. The Obstetrical Society simply laid down a few regulations, and if the certificates corresponded with the schedule of regulations the women were admitted to the examination. He mentioned the case of a woman from the Queen Charlotte's Hospital who had not attended a single case of labour, but who got her certificates signed by a House Surgeon who had to be got rid of soon after, and although the Society had been informed of the way in which the certificates had been obtained the woman was admitted on the ground that as the certificates were in due form the Society had no right to refuse her admission to the examination. This showed a want of due responsibility, and that was what they deplored. That was why they were endeavouring to improve the standard. At present a large number of women took up the calling either without receiving any instruction, or obtained a certificate from the Obstetrical Society of London without undergoing any systematic education or properly supervised practical training. Thoroughly trained midwives always looked to the medical man of the locality as their great help in cases of difficulty. The more educated they were the more disposed were they to

call in a doctor directly anything went wrong. That indeed was an important part of their training, it was because the untrained did not know their business that they were so reluctant to ask for the assistance of a medical man. There was, however, a defect in the Bill, and that was in constituting the General Medical Council the body to administer the rules. He asked whether it would not be possible to form a Board preferably not consisting of more than six members, say three to be elected by the Medical Council and three to be appointed by the Privy Council, such members to hold office for three years, two retiring annually, of whom three should be country practitioners and three metropolitan. The profession would be more in touch with such a body, and the necessity for re-appointment would infuse new blood from time to time.

Dr. LOVELL DRAGE moved that the discussion be adjourned until the next meeting. This was carried.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, DECEMBER 10, 1890.

C. H. F. ROUTH, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 28 Fellows, 13 Visitors.

The following was elected a Fellow of the Society: Dr. L. L. Lankford, Virginia, U.S.A.

The following was proposed for election: Dr. Farquharson, Newcastle.

Dr. PURCELL showed a specimen removed from a patient aged forty-five, who was admitted on September 23rd, complaining of bearing down pains on moving. Nothing abnormal was discovered in the abdomen, but per vaginam in the right posterior *cul de sac* a moveable mass was detected, across the lower part of which a vessel was felt to enter. It was behind and directly to the left of the uterus, the depth of which was normal. The abdomen was opened in the middle line under ether, and the tumour, about the size of an orange, removed. The tumour evidently consisted of the right ovary; the left was seen to be cystic. It turned out to be a dermoid cyst and contained hair. The patient had made a good recovery so far as the operation was concerned, but she was, unfortunately, suffering from heart disease.

Dr. Purcell then showed another specimen removed from a woman, aged forty-three, admitted on November 14th, the mother of four children. A year ago she had experienced pain in the right ovarian region, and the abdomen commenced to swell. She was thought to be pregnant. Some time after this she was admitted to the Chelsea Hospital for Women, where she was examined by a number of medical men, but was ultimately discharged without anything being remarked. The abdomen went on swelling until it attained the size which it

was when she was admitted. The patient was the subject of an umbilical hernia. There was dulness up to the umbilicus in the middle line and into both loins, tympanitic at the epigastrium. He was assisted in the operation by Mr. Jessett. He made a three-inch incision in the middle line, and on opening the abdomen a quantity of straw-coloured fluid escaped, and on introducing the hand a new growth connected with the right broad ligament was felt, but no sign of a cyst wall. The mass was soft and irregular, about the size of the fist. There were no peritoneal or intestinal adhesions. A ligature was applied, and a second still lower, and the growth was removed with scissors. It was thought to come from the Fallopian tube, so it was also removed. There was some difficulty in arresting the hæmorrhage. A glass drainage tube was left in for eight days. Altogether about $10\frac{1}{2}$ pints of fluid escaped. It resembled ascitic fluid, but the last to escape was ropy and viscid. The fluid was highly albuminous, and contained cells and granules. Patient made a very good recovery. No ovary could be found; it, the fimbriated extremity of Fallopian tube, and portion of the tube formed the mass. The growth removed in appearance closely resembles an intra-cystic growth. It is made up of irregular masses, held together by slender threads after the manner of a bunch of grapes. These masses are again made up of smaller ones, and are composed of small cysts, containing fluid, and papillomatous nodules, which help to cause the irregularity of surface, and very closely resembles minute intra-cystic growths. The tissue is soft, and can easily be broken down. A section made through what appeared to be more solid tissue passes through a cyst size of little finger nail, containing clear fluid. A second cyst opened contained an intra-cystic growth; rest of the section shows a firm tissue, and evidently the ovary. Attached to this mass on one side is what is undoubtedly the fimbriated extremity of the Fallopian tube, and the whole mass of the tumour gives the idea of having sprung from this spot—an oval-shaped surface externally, into which growth protrudes, will be found to correspond with one end of the portion of Fallopian tube

removed. Microscopical examination of a portion of the tumour shows it to be made up of small branching papillæ; the stroma is myxomatous, with branching stellate cells, which near the extremity the papillæ appear as branches of spindle cells. The stroma is pierced by cystic spaces, into which branching papillæ project; the stroma contains small blood-vessels. There is a covering epithelium. The same epithelium lines the cysts in the stroma.

Adjourned Discussion on the Midwives' Registration Bill.

Dr. LOVELL DRAGE observed that the Bill had been introduced by the Midwives' Institute, and had been backed up by various professional bodies, such as the Obstetrical Society and the British Medical Association, but he pointed out in regard to the latter that at the general meeting a motion had been carried in favour of postponing action in respect of the Bill. He asked whether the Fellows of the Obstetrical Society had been consulted with regard to the matter before a decision had been arrived at? As a matter of fact they had not been consulted, and he urged that in these days of representative institutions, the course adopted was not the proper thing. He objected to persons putting forward their own opinions through the organisations which they represented. He explained the silence by the fear that the bulk of the profession would not ratify their views. The two points calling for attention were (1) the necessity for such a Bill, and (2) the propriety and justice of this particular Bill. As to the necessity, Dr. Aveling had brought forward certain figures which Dr. Moullin had proved to be utterly worthless. In the *Medical Press* he had challenged anyone to produce figures to prove that the mortality among lying-in women was influenced to any appreciable extent by the kind of attendance she received at the time of labour. No one had taken up his challenge, and for very good reason, viz., that the preventible mortality amongst women, at all events in private practice, was due, not to defective attendance at the time of delivery, but to defective hygienic surround-

ings and improper nursing afterwards. What was wanted, then was improved nursing among the poor, and not the creation of a new order of second-rate practitioners. Their own profession had been purged from this; the old apothecary had disappeared, and no one regretted him, and taking it altogether he thought it was a very retrograde proposal. They had been told that two-thirds of the women in the country districts were attended by midwives, but in his own district there were 197 births last year, and to his knowledge 167 of them were attended by practitioners, and of the remainder it was no more than probable that many, if not most, were attended by other medical men in the district. He thought the observation that Members of Parliament often knew nothing of the Bill which they were backing was borne out by the remarks that had fallen from the speakers at the last meeting. He suggested that if it was necessary to protect the public from one class of people, it was equally incumbent upon them to protect them against opticians and electrical quacks. It was not a fact that any women were unable to have the assistance of a medical man, because the poor-law was there to help those who were unable to provide for themselves. They were all agreed that women should have the best possible attendance, but the Bill proposed to hand them over into the hands of a partially-trained, perhaps, but wholly uneducated class. He urged that the object of the Medical Act of 1886 would be stultified by such a Bill. He observed that comparison between labours in lying-in institutions and those outside was unfair, seeing the advantages attending the former in the matter of skilled assistance, cleanliness, &c. In the country these midwives would have their reputation to make, and they could hardly do otherwise than give it to be understood that they were better than the ordinary doctor. It was idle to talk about restrictions, for no rules that human ingenuity could frame could keep them within the limits of their duty.

The PRESIDENT read a letter from Dr. Fitzgerald, who regretted that he was unable to be present, and said that he could not understand anyone maintaining a mode of oppo-

sition to the Bill, which was calculated to recommend itself to all unprejudiced persons. Midwives existed, and could not be abolished, and he did not think that any member of their noble profession would oppose a measure intended to improve their condition from purely trade interests. If the Bill was imperfect it could be amended, but it ought not to be opposed, seeing that it was for the benefit of the public.

Dr. MACNAUGHTON JONES said it was no ordinary interest he took in this Bill. He had for years been engaged in the training of midwives, and in 1872 had taken the major part in starting for this object an institution in the South of Ireland, the only one of its kind south of Dublin. The Cork Maternity had relieved to this date over 6,700 women, a large number of intelligent midwives had been thus trained, and in addition it had been the means of educating practically some hundreds of medical students. Therefore, it was that he took more than a passing interest in any effort to improve the education of midwives. He would recall the attention of the Fellows to Dr. Aveling's paper. In the first place, he should say he objected to the title of the Bill. He would prefer "The Education and Control of Midwives (England) Bill." This would not pledge them to the principle of registration, and would show that the operation of the Bill does not extend to Ireland or Scotland.

Dr. Aveling puts several questions:—

1. "*Is the public safety a subject demanding legislative action?*" I say, yes! But "public safety" is a term of wide and general application, and it has to be pointed out that imperfect or defective laws, made under this plea, which stereotype abuses, have been at all times fertile causes, not of safety but of danger to the public.

2. Dr. Aveling asks: "*Is the calling of a midwife one which under the plea of public safety should be dealt with by the Legislature?*" I reply, yes, so far as such legislative action shall efficiently prevent malpraxis and the consequence of ignorance or unjustifiable assumption of responsibility on the part of a midwife.

3. Dr. Aveling enquires, "*Does not humanity prompt the employment of active measures to prevent the death and misery caused by midwives?*" I say, certainly! Dr. Aveling might have included this third question in his second; "humanity" and "public safety" are terms closely allied, so far as the operation of the laws affecting society, which both enforce, is concerned.

4. "We want," Dr. Aveling says, "a ready and inexpensive method." For "ready and inexpensive" I read *cheap* and *imperfect*. Further on he states that "the preliminary expenditure of time and money which will be required, will make it more difficult for women to adopt this calling. Evidently, however, he gauges this obstacle at a low figure, for he regards it as "ready and inexpensive."

5. "The Bill does not create," says Dr. Aveling (referring to the clause enabling existing "Gamps" to register) "ignorant Gamps." I say, no, but it places them on the register and thus legalises their ignorance.

Dr. Aveling puts the query:—

6. "Are midwives to be abolished or bettered?" "Bettered," I reply, certainly; but not at the expense of [what Dr. Aveling himself regards as the *raison d'être*, of this Bill] the public safety, the disregard of professional traditions, just and vested professional rights, and not by the bungling and uncertain methods proposed by this Bill. "An intelligent midwife," says Dr. Aveling, "is a great boon to the doctor." "Certainly," I reply, "but a meddlesome and officious one is his greatest curse."

Dr. Aveling says that the Bill "does not construct a new order of medical practitioners." I say it does. It simply differentiates the midwife practitioner as a lower class of medical practitioner.

Dr. Aveling says that the General Council of the British Medical Association began to take an interest in this Bill in 1873; in 1883 it began to draft a Bill, in 1890 it completed its labours, producing the exceedingly imperfect Bill. It seems that for seventeen years the Council had been labouring and at last had to fall back on Dr. Aveling to do

As to the Obstetrical Society, I am a Fellow of that body, yet I heard nothing of the consideration or approval of the Bill by the Council of that body until I was asked by an outsider by circular if I approved of it or not, when I replied in the negative.

Dr. Aveling asks us to state candidly whether we intend to amend or destroy the Bill. We do not intend to amend or destroy a *satisfactory Bill*, but to amend a bad Bill, *and if those amendments are not accepted*, to do our utmost to destroy it.

"*Do not attend to details and attack principles*," says Dr. Aveling. He tells us we cannot destroy a tree by hacking at its twigs.

I tell Dr. Aveling that "details" are not the twigs but the very roots of this tree. A tree, we are told, "is known by its fruit." It will be too late to go even at the twigs when the roots are firmly set, and this obnoxious measure has begun to bear fruit.

Gentlemen, if this Society were to approve of this Bill we should be "buying a pig in a bag." As usual, the threat is held out, "if you do not accept this Bill you will get a worse one forced on you." Medical legislation reminds one of the game of football; the game is maintained by the dual forces of medical exigency and political convenience. Anything is good enough at the hurried end of a session for that profession whose highest motto (adopted by one of our Medical Journals) is—"Salus populi suprema lex." Judged by the principle of that motto this Bill stands condemned. The mountain had laboured and brought forth a mouse—not even a healthy mouse, but an abortion or more correctly a dangerous and misshapen product of conception. Meddlesome midwifery, we are told, is bad—meddlesome medical legislation is worse—unless it be provided with all those safeguards which harmonious action with the medical profession alone secures.

Dr. Aveling's resolution is absolutely a colourless one. It asks us to approve of a principle; it does not refer to this Bill before us.

I beg to move as an amendment that "this Society, while recognising the necessity for such legislation as shall prevent incompetent women acting as midwives, does not approve of the proposed 'Midwives' Registration Bill.'"

The Association considers that the Bill does not provide for the public safety, and regards its clauses as inadequate to secure competent midwives for the necessitous poor.

[The second clause of this amendment Dr. Macnaughton Jones subsequently consented to withdraw, Dr. Aveling agreeing to accept the first as a substitute for his resolution].

Dr. WOODS said Dr. Aveling had asked them whether they wished to oppose the Bill absolutely, or criticise the details. He urged that it was their duty to oppose it, both in principle and in detail. The principle appeared to be that midwives were competent to attend ordinary labours, therefore that they should be trained and registered for the purpose. He had turned, however, to one of the latest works on midwifery (the compilation of American Obstetrics), and he had remarked that Engleman, in discussing the reasons of the excessive mortality among lying-in women, observed that it arose from "a prejudice that has been handed down for centuries that midwives were competent to attend normal labour." Engleman insisted upon the fact that the so-called normal labours caused a large number of accidents. It was evident, therefore, that the very principle was wrong. As regards the details, so many criticisms of an unanswerable character had been advanced, that no one had attempted to defend the Bill. It had been admitted that a coach-and-four might be driven through it, and that there were errors in every clause calling for correction. He pointed out in reference to Clause 6, that it contained no provision excluding medical practitioners from its scope, and consequently a female medical practitioner would be debarred from recovering for such attendance, because she was not on the Midwives' Register. Secondly, it said that none but a registered midwife shall be entitled to recover, while the Medical Act, 1886, said just the contrary. He contended that it was clearly made out in that Act that

midwifery was a branch of medicine, and he contended that it was going back to the plan of fragmentary diplomas, to authorise unqualified women to practise in that department. He added that the Act would place midwives in the same position in the eyes of the law in regard to registration, as an F.R.C.S. for example.

Dr. HODSON said that it had been argued that other countries gave a legal status to midwives, but so did this country until about a hundred years ago, when it was found necessary to put a stop to it. He denied that they exercised their calling without restriction. In case of misconduct they were liable to civil and criminal action, and this was a sufficient check. He discussed the position of a qualified midwife in the case of an inquest, and urged that the jury would certainly be satisfied with her assurance that everything necessary was done, without calling for any medical evidence. Far from the public wanting these women, they avoided them, and only had recourse to their services when pressed by poverty. He denied altogether that the medical profession had asked for the Bill. He pointed out that the Registrar-General had given 3,000 as the probable number of midwives attending 180 cases a year, yet they were expected to attend a month on each case, so this must be a mistake. In the East-end of London there were many medical men who attended two or three hundred cases a year personally. In his own neighbourhood not more than 6 per cent. were attended by midwives. He said that the deaths had been put at 1 in 600 among those attended "by medical men and midwives." They were thus coupled together as co-equal. If they admitted that for midwifery purposes medical men and midwives were equal, although one was vastly superior to the other, then they must admit that the unregistered midwife was the equal of her registered sister, who after all knew but a little more. As to the Act lessening the number of midwives, he asked whether the Dentists Act had lessened the number of dentists, and whether the Pharmaceutical Act had lessened the number of chemists? Nothing of the kind. They would simply bring

into existence a number of women, people who, until the Bill had been passed, would never have thought of attending midwifery cases. In fact, they would be giving partially educated women the Government stamp. If they were going to register existing midwives he did not see how they could avoid registering those who practised as monthly nurses. The same thing occurred under the Dentists Act, when bricklayers and the like managed to get registered as dentists.

Dr. MACKENZIE said that if they admitted women to practise midwifery, they would soon have them prescribing for children's ailments and minor ailments of all kinds. He pointed out that this was already the case in respect of women who had been turned out by private medical men, or quasi-private institutions, as qualified *masseuses*. He had already reviewed instances of this sort of thing. It would be a thousand times worse if these women were let loose on society with a sort of hall mark. He concurred in the view that if existing midwives were admitted to registration it would be impossible to refuse the hospitality of the Register to monthly nurses, of whose behaviour he quoted an instance. He urged that if a plébiscite were taken of the whole body of general practitioners, there would be a majority of thirty to one against it. It was evident to anyone who took the trouble to read the Bill that not one coach and horses could be driven through it, but the whole of a coaching club.

Mr. GEORGE BROWN said that really there did not remain much to be urged against the Bill, after all that had been advanced. He regretted that so little had been said on the other side in its defence, but the Society was entitled to the thanks of the profession for having afforded an opportunity of discussing this important measure. If the British Medical Association had done the same thing before expressing an opinion, it would have been more satisfactory. He urged that it was their duty to vote against it, for it affected the interests of medical men more than any other proposal that had been made during the last twenty years. He urged that for many

years they had been trying to lay down the importance and the necessity, in the public interest, of ensuring that the public should be treated only by those thoroughly experienced in all branches of the medical profession. In 1886, after a great deal of trouble, they had succeeded in inducing the Government to pass an Act providing that in future, sick people should only be attended by men who had testified to their proficiency in medicine, surgery, and midwifery. Now it was proposed to go back on that entirely, and raise a new order of practitioners, who would be authorised by law to attend midwifery cases. This was a very serious position to be taken by any body of men, whether the British Medical Association or any other. It amounted to this—that they were going to the Government to ask them to go back on their word, and authorise persons to attend in only one department of the profession. He hoped that the Society would not, as it were, make their past labour vain by any such measure. It had been said that the Bill was necessary in the interests of the important body of midwives, but he maintained that these women constituted a danger to the public, and the proper thing to do was to squelch them entirely out of existence. The public would not have these women unless they were forced upon them. No woman went to a midwife if she could possibly help it. He was sorry that the Poor-law put women into the hands of midwives. The Boards did this for the sake of economy, and that in itself was an evil. He could understand their going to Parliament to ask that really qualified persons should be insisted upon, either medical men or medical women, to discharge these functions. That at any rate would be logical. They had thrown open the doors of the profession to women. They could all come in, but unfortunately lady doctors did not appear to lay themselves open to this sort of work. That brought him to this point, viz., It had been put forward at the last meeting that they were opposing this Bill in merely sordid interests. This he denied. He himself had long ceased to attend midwifery, but he was none the less strongly opposed to the Bill, because he felt that

his opposition was in the public interests. The Bill constituted a public danger, and he had great pleasure in supporting the amendment brought forward by Dr. MacNaughton Jones. He denied, moreover, that these women were wanted. The average weekly number of births in London was about 2,250, and there were 5,000 medical men practising within the metropolitan area. That made about one case a fortnight for each of them. In conclusion, he urged that they would be neglecting their duty to the profession and to the public if they did not oppose this Bill in every possible way.

Dr. BEDFORD FENWICK said that in the first page of Dr. Aveling's paper they were asked to examine the grounds upon which the superstructure was raised. This ground in Dr. Aveling's paper was simply figures, and these figures were stated to be only of an approximate character. He did not give them chapter and verse for any of them, and he could only express his surprise and regret that Dr. Aveling should have ventured to bring such figures before a scientific society. If they considered the number of births in England and Wales and remembered that half were attended by midwives, "it would be evident that *by adding the lives of the mothers to those of the children*, they would get a total of lives placed at the mercy of midwives of 900,000." In Dr. Aveling's paper in the *British Medical Journal* the number of births was given as 900,000, and he asked him to explain the discrepancy. That was only one instance of the inaccuracy that pervaded Dr. Aveling's paper. Dr. Aveling had repeatedly stated that the average mortality was 3 per 600 among women attended outside, while that in lying-in hospitals was 1 in 650. He had taken the trouble to work out some figures for himself, and this was what he found. At the Imperial Lying-in Hospital at Vienna the death-rate since 1881 had been 7 per 1,000—equal to 4.2 in 600. At the Paris Maternité, from 1882-7, the average had been 11 per 1,000—equal to 6.6 in 600. Of course they might be told that these hospitals were worked by benighted—but let it be remembered, State registered—midwives, so he would turn to English hospitals, where this was not the

case. At the institution in York Road the mortality was 6 in 1,000—equal to 3.6 per 600. In the figment that was brought before the public it was stated that the awful mortality throughout England and Wales was 1 in 200—that is, 3 in 600, but, as he had shown, the lowest mortality in the above lying-in institutions was 3.6 in 600, and this figure was usually largely exceeded. He urged that they must bear in mind that this was really legislation for the medical profession. Fifty years ago the chemists were controlled by medical men. Then, very wisely for themselves, they formed a society, and got altogether out of the sphere of medical men's influence. What results this had had for the public and the profession they knew but too well. If they were going to allow midwives to be controlled by the County Councils, it would be inviting disaster. Midwives ought certainly to be better trained, but they ought to be controlled by medical men, so that they might know what their training was, and how their practice was carried on. But it was a revolutionary and indefensible principle to hand these ignorant women over to a group of equally unskilled laymen.

Dr. BANTOCK said that at their last meeting he had pointed out that no definite issue was before the meeting, and he was glad that Dr. Jones had brought a definite motion before them. He would have great pleasure in supporting it.

Dr. FENTON said that there was not such a difference of opinion between Dr. Aveling and his opponents as one might have thought from the heat of the debate. As strongly as he, each speaker agreed that midwives as at present existing were an ill-educated lot, for the duties they had to perform, and that it should be the desire of medical men to improve them and to materially better their education. The Bill was undoubtedly an effort in that direction. Until they defined what a midwife was they could do nothing. He admitted that at first many women would be admitted who ought not to be registered, but they would gradually be eliminated by a natural process of selection. As a body, any process of suppression was impossible. Good or bad the midwives would

be always with them. This being the case, he urged that they should endeavour to make the best of them. He did not see why a man in large midwifery practice should not have a dozen or so of these women to watch his cases. After all they were but watchers. Labour was a perfectly natural process, unless something went wrong. As for any mystic rites the less of them that were performed the better. (A FELLOW : What about the perineum ?) The perineum should be left severely alone. He asked them whether it was not their everyday experience that the better a nurse was the less she relied upon her own unaided resources, and the more readily she fell back upon the medical man as her guide, philosopher and friend ? It was only the untrained and the ignorant who considered that their dignity was at stake when the doctor was called in. He regretted that all the speakers were on one side that evening, but he was proud that their Society should have been the one to take into their confidence the medical profession in order to discuss the subject. He felt sure the effect of the debate would be to improve the Bill. He mentioned that he was collecting the material of the debate, and hoped to hand copies to the gentlemen who had the conduct of the Bill in the House of Commons. The Bill was to come on for a second reading on January 27th, and by that time any Member of Parliament would have the opportunity of acquainting himself with the views that had been expressed upon the subject.

Dr. HEYWOOD SMITH said it seemed useless to attempt to stem the tide of opposition, but he pointed out that it was a mistake to oppose the Bill because it had been introduced by this or that group of persons. At the last meeting it was said that there was an absolute necessity for some such legislation, and with this he thought all of them would agree—that midwives ought to be better educated. He thought that Parliament should step in and insist upon this. They had heard a lot of nonsense talked about a little knowledge being a dangerous thing, but it was a mistake to compare midwives and medical men.

The duties of midwives were laid down, and medical men ought to be thankful that there was a prospect of poor women being attended by a better class of women in the hour of labour. Medical women like medical men had a right to recover fees for midwifery attendance. Registration was not a diploma. He said that sooner or later midwives must be under medical supervision. As regards the position of medical men, there was no doubt that if midwives liked to strain a point as chemists often do, they would make mistakes and the public would ultimately have to fall back upon the doctor. Possibly Dr. Lovell Drage's district might be one where people could afford more generally to pay for the services of medical men. [Dr. LOVELL DRAGE: It is a poor agricultural district.] It was necessary to place before Members of Parliament the points upon which amendments were desirable. Of course, it would press hard upon certain people, but this might be said of any reform. He agreed that it was after all a question of public safety. The lying-in hospitals were doing their best to send out a good class of midwives, but in spite of this there were a number of uneducated women. He urged that though the Bill might not be perfect there was no reason why it should not be licked into shape in Committee.

Dr. AVELING said he feared he would have had to take up a large amount of the time of the Fellows in answering a number of objections, but he was happy to be able to state that an arrangement had been made with the mover of the last amendment which had resulted in its being so altered that it would probably receive general assent. The two principal points for which he had contended had been agreed to by the majority of speakers, viz.: That midwives ought to be better educated, and that legislation was required to prevent incompetent women acting as midwives. As the amendment expressed this opinion he was willing to withdraw his resolution. He did not think the Bill perfect, but he thought there would be no difficulty in making it so by utilizing the valuable criticisms which had been offered during the debate.

There were, however, some points upon which he would like to say a few words. His figures had been unmercifully assailed, but he believed they still remained approximately true. The question of the registration of midwives, however, did not depend upon him or his figures. The constantly recurring reports of fatal malpraxis among midwives were stronger arguments than any numerical ones he could give.

It had been suggested that the Bill would open a wide field for nefarious practices. There are no grounds for this fear. Ignorance and crime are fast friends. A better educated class of midwives will also be a more moral class. In a paper on "Infanticide in Liverpool," read before the Social Science Association, Mr. Lowndes, among the preventive measures, gives the first place to the recommendation that "No women should be allowed to practise as midwives unless duly qualified." "The practice of midwifery by unlicensed persons," he says, "should be punished by a heavy fine or imprisonment. By these means we should get rid of that low class of midwives which infests all large towns as well as many smaller ones and villages, most of whom are incompetent, and many of whom are ready to connive at concealment of birth, fraud and even foul play."

Dr. Aveling said he noticed with great regret the absence of Dr. Rentoul. Everyone must have appreciated the valuable criticisms upon the Bill which he made at the last meeting, and when the time comes for the amended Bill to be further amended his remarks must receive grave consideration. It was impossible to conceive that he should have spent so much time in pointing out the deficiencies of the Bill and suggesting remedies for its imperfections if, in his heart, he felt no Bill was to be passed. His remarks, which were delivered with cool deliberation, were not destructive, but constructive. He perhaps made a mistake in wishing to fix minute details by the Bill, the disadvantage of which was pointed out by Mr. Rathbone, who said that the advantage of the Medical Council and Privy Council being able to make rules was that they could be altered from time to time, as might seem necessary,

without coming to the House of Commons. Dr. Rentoul was not an uncompromising opponent. He had favoured the speaker with the conditions which would make him work for a Bill to register midwives. The first was that it should restrict, with penalties, the duties for midwives to cases of labour in which the vertex alone presents. The second was a guarantee that in future no Bill would be introduced giving midwives further powers. The third was that the great mass of the profession approved of the Bill. Dr. Aveling thought there ought to be no difficulty in agreeing with the spirit of these conditions. He believed, however, that one, after due consideration, would not be insisted upon, viz. : the restriction of midwives to the management of cases of vertex presentation only. In occipito-posterior positions, when the foetal head rotates into the hollow of the sacrum instead of in front, great danger to mother and child may result if the case is not most skilfully treated. Dr. Busey, speaking of vertex presentations in the "System of Obstetrics," says, "If I were asked what one obstetrical difficulty, in my experience, has caused most maternal and foetal deaths—not necessarily fatal accidents, however, often making the rest of life worthless, or still worse than worthless, a tragedy—I think I would say occipito-posterior positions, where the occiput has rotated into the hollow of the sacrum, and which have been improperly treated." Lying-in hospitals had found from experience what cases their midwives might safely attend, and surely from the experience of these Institutions the "Prescribed regulations" might be framed. The whole profession would be against the establishment of a class of midwives higher than that proposed by the Bill. There could be no grade between a midwife and a medical woman.

In conclusion, Dr. Aveling hoped, as it had been unanimously agreed by the Society that the education of midwives ought to be improved, and that legislation was required to prevent incompetent women acting as midwives, that the Fellows would use their influence to have the amended Bill read a second time, after which the proposed additional amendments might be duly considered, and, if approved, adopted.

He had just received a note from Dr. Holman, which showed that as far as the British Medical Association was concerned it was not the Parliamentary Bills Committee alone which favoured the registration of midwives :—

“ THE BARONS, REIGATE,

“*9th December, 1890.*

“DEAR DR. AVELING,—The South-Eastern Branch of the British Medical Association met to-day, and resolved, ‘That the general principles embodied in the Midwives’ Registration Bill be approved. The South-Eastern Branch numbers over 500 members, and it was a full meeting of Council. The sub-districts of the Branch have nearly all agreed to resolutions in favour of the Bill, and expressing complete confidence in leaving the matter in the hands of the Parliamentary Bills Committee of the Association.

“Yours faithfully,

“C. HOLMAN.”

Dr. Mansell Moullin’s amendment having been lost, Dr. Macnaughton Jones’ altered amendment, namely :—that this Society, while recognising the necessity for such legislation as shall prevent incompetent women acting as midwives, does not approve of the proposed “Midwives’ Registration Bill,” which had been adopted as a substantive resolution, was put and unanimously agreed to.

A vote of thanks to Dr. Aveling was proposed by the PRESIDENT and carried by acclamation.

The Society then adjourned.

[We append a reprint of the Bill for the information of those who may not have seen it.—ED., *British Gynæcological Journal*.]

MIDWIVES REGISTRATION BILL.

[As amended by the Select Committee.]

ARRANGEMENT OF CLAUSES.

- | | |
|--------|---|
| Clause | 1. Short title. |
| " | 2. Rules respecting examination of midwives. |
| " | 3. Examination and registration of midwives by
County Council. |
| " | 4. Regulations by Privy Council. |
| " | 5. Registration. |
| " | 6. Privileges of registration. |
| " | 7. Fees and expenses. |
| " | 8. Provision as to Scottish, Irish, and as to colonial
and foreign midwives. |
| " | 9. Provision for existing midwives. |
| " | 10. Power to Privy Council to establish a general
register of midwives. |
| " | 11. Notice of death of midwives. |
| " | 12. Supplemental provision as to register. |
| " | 13. Publication of register. |
| " | 14. Penalty on obtaining registration by false repre-
sentation. |
| " | 15. Penalty for wilful falsification of register. |
| " | 16. Prosecution of offences. |
| " | 17. Appeal. |
| " | 18. Exercise of powers by Privy Council. |
| " | 19. Definitions. |
| " | 20. Extent of Act. |

A BILL

[As amended by the Select Committee.]

TO PROVIDE FOR THE REGISTRATION OF MIDWIVES.

*(Prepared and brought in by Mr. Fell Pease, Sir Frederic Fitzwygram, Sir Roper Lethbridge, Dr. Farquharson, Mr. Rathbone, and Mr. Pritchard Morgan.)**Ordered, by the House of Commons, to be Printed, 18th July, 1890.*

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. This Act may for all purposes be cited as the Midwives Act, 1890.

2.—(i.) For the purpose of the examination of women desiring to act as midwives, the General Council shall, as soon as may be after the passing of this Act, cause to be framed and approve rules regulating the conditions of admission to examinations and the course of study to be pursued previous to examination, the qualifications of examiners, the method and periods and the subjects of such examinations, and the general standard to be attained by women passing the examinations, with a view to secure the possession of adequate knowledge and practical skill by all women who pass those examinations.

(ii.) The General Council shall submit the rules approved by them to the Privy Council for confirmation.

(iii.) A draft of the rules shall, at least one month before they are considered by the Privy Council, be published in such manner as the Privy Council may direct as sufficient to give information thereof to all persons interested, and the Privy Council, after taking into consideration any representations made to them in writing during one month after such publication, may confirm the rules, either with or without modifications or additions.

(iv.) The rules when so confirmed shall be forthwith officially published under the superintendence of Her Majesty's Stationery Office.

(v.) If the General Council fail to make such rules as the Privy Council can confirm before the last day of June one thousand eight hundred and ninety-one, the Privy Council shall forthwith cause rules to be framed for the purposes in this section mentioned, and such rules shall take effect as if they had been made by the General Council and confirmed by the Privy Council.

(vi.) New rules may be made by the General Council and confirmed by the Privy Council in like manner as original rules, and if the General Council, within a reasonable time after they are so required by the Privy Council, fail to make any new rules to the satisfaction of the Privy Council, the Privy Council may cause new rules to be framed, and those rules shall have effect as if they had been made by the General Council and confirmed by the Privy Council.

3.—(i.) After rules for the examination of midwives made under this Act have been officially published, every County Council shall provide for the execution of this Act within their county, and for that purpose shall—

- (a.) Appoint a sufficient number of competent examiners, to be approved by the Privy Council, and provide for the examination, in the prescribed manner, and in accordance with the said rules, of women desiring to act as midwives; and
- (b.) Grant to every woman who passes the examination in accordance with the standard fixed by such rules the prescribed certificate that she is entitled to be registered as a midwife, and that certificate shall entitle her to be registered in the midwives' register of any county in which she is or is about to be ordinarily resident or acting as a midwife; and
- (c.) Keep a record of the midwives to whom any such certificate is granted, and a register of midwives ordinarily resident or acting as midwives in the county who hold certificates granted under this Act by that or any other County Council, or are otherwise entitled to be registered under the provisions of this Act.

(ii.) The said provision for the examination of midwives shall enable women to be examined at such places in the county as seem expedient to the County Council for the purpose of enabling persons to be examined within a reasonable distance from the place where they reside: Provided that no woman shall have any right to claim to be examined until after she has first produced a certificate from a registered medical practitioner practising in the district in which she is herself resident that she is of good conduct and in good health.

(iii.) The said record and register shall respectively be kept in such manner and form as may be prescribed by regulations of the Privy Council, and those regulations shall provide for an entry in a separate column of the register, opposite the name of each person, of words indicating the qualification entitling such persons to be registered, and any other special diploma or certificate which is held by such person, and which the Privy Council may by order specify as being sufficient for registration.

(iv.) Every County Council shall give the prescribed public notice of the establishment of a midwives' register and of the provisions made for the examination and registration of midwives.

(v.) If in the opinion of the Privy Council any County Council fail to make adequate provision for the holding of examinations in accordance with this Act, the Privy Council may take such steps by appointing examiners and otherwise as may appear to them necessary to secure the due conduct of such examinations, and any expenses from time to time certified by the Privy Council to have been incurred through the exercise of this power shall be defrayed in like manner as expenses incurred by the County Council in the execution of this Act.

(vi.) Any two or more County Councils may, with the consent of the Privy Council, combine together for the purposes of holding examinations and of keeping a register under this Act, or for either of those purposes.

4. The Privy Council shall make regulations for carrying this Act into effect, and in particular for the following purposes or any of them; that is to say,

- (a.) Providing for and enforcing the supervision of the examinations under this Act, and the presence thereof of persons appointed in manner provided by such regulations, for the purpose of securing that a uniform standard of knowledge and skill may be required from all persons to whom certificates are granted under this Act :
- (b.) Providing for erasing from the midwives' register the names of women who are dead or have ceased to act as midwives, and for erasing the names of women or suspending, subject to the prescribed right of appeal to the Privy Council, any women from acting as midwives who have been convicted of offences, or have been guilty of infamous or disgraceful conduct in relation to their duties as midwives, or of gross incompetence, or of any breach of the regulations under this Act respecting such duties, or of repeated drunkenness, and for the endorsement of any order of suspension on the certificate of registration of the women suspended, and for the publication of the fact of the removal of the name of any woman from the register, or of the suspension of any women, and for the restoration of any women who may have been struck off the register, or who may have been suspended.
- (c.) Providing for the issue to every registered midwife of a certificate of registration, and requiring every registered midwife to produce her certificate on demand to the prescribed persons.
- (d.) Regulating any matter directed by this Act to be prescribed.

And the Privy Council may attach to the breach of any such regulations such fines, not exceeding in any case forty shillings to be recovered on summary jurisdiction, as they may think necessary.

5. From and after the first day of January one thousand

eight hundred and ninety-two a person shall not be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description, implying that she is registered under this Act, or is specially qualified to act as a midwife, unless she be registered under this Act.

Any person who, after the first day of January one thousand eight hundred and ninety-two, not being registered under this Act, shall take or use the name of midwife, or any other such name, title, addition, or description as aforesaid, shall be liable, on summary conviction, to a fine not exceeding five pounds; provided that nothing in this section shall apply to legally qualified medical practitioners.

6. A woman registered under this Act shall be entitled to act as a midwife in the United Kingdom. From and after the first day of January one thousand eight hundred and ninety-two no woman shall be able to recover any fee or charge in any court for attendance or services rendered as a midwife unless such woman is registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as a midwife in cases of natural labour only, in accordance with the prescribed regulations.

7.—(i.) The County Council may charge the prescribed fees in respect of the examination, certificate, and registration of any person, the inspection of the record or register, and other matters, so that the total of the fees charged in respect of the examination and certificate does not exceed forty shillings, and so that the fee does not exceed in respect of the registration of any person five shillings, and in respect of the inspection of the record or register, or any other matter, one shilling.

(ii.) The fees received by a County Council under this Act shall be carried to the county fund; and all expenses incurred by a County Council in the execution of this Act shall be defrayed out of the county fund as general expenses.

8. A woman who has obtained in Scotland or Ireland, or in any British possession, or in any foreign country, any

license or other authority to act as a midwife, may, under such restrictions as may be prescribed for the purpose of securing a sufficient guarantee of good character and good health, and the requisite knowledge and skill, be registered in a midwives' register in the prescribed manner.

9.—(i.) Every woman who at the passing of this Act is *bonâ fide* acting as a midwife, or has served as a pupil midwife in some hospital or other public institution, and claims to be registered before the expiration of eighteen months after the passing of this Act, and produces the prescribed evidence of her title to be so registered, shall be entered in a midwives' register, and any such woman shall be entitled at any time thereafter to present herself for examination under this Act, at such reduced rate of fee as the Privy Council may prescribe.

(ii.) The fee for the registration of any such person shall not exceed two shillings and sixpence.

10.—(i.) The Privy Council may provide by their regulations for the keeping and the publication from time to time of a general register of midwives, and either for the transmission by the registrar of every county register to the registrar of the general register of the names of all midwives registered in the county register and the payment by the County Council of the prescribed portion of the registration fees towards the expenses of the general register, or for the discontinuance of the county registers and the registration in the general register of all persons entitled to be registered as midwives, and the keeping of such local registers and registration offices as appear to the Privy Council requisite.

(ii.) If the sums received on account of the registration fees and by the sale of the general register do not suffice to defray the expenses of keeping, printing, and publishing that register, the deficiency shall be charged in the prescribed proportions on the county funds of the several counties, and any sum certified by the Privy Council to be so charged on any county fund shall be paid by the County Council to or to the order of, the Privy Council on demand.

(iii.) The provisions of this Act relating to the erasure and suspension of names shall apply to the general register in like manner as to the county registers, and a midwife shall have the like right to be registered in the general register, and that registration shall have the like effect as if the general register were a county register.

11. Every registrar of deaths in England and Wales, on receiving notice of the death of any woman on any county midwives' register, shall forthwith transmit by post to the registrar under this Act a certificate under his hand of such death; and on receipt of such certificate, the registrar shall erase the name of such woman from the register of midwives, and shall transmit to the said registrar of deaths the cost of such certificate and transmission.

12. A midwives' register shall be deemed to be in proper custody when in the custody of the officer appointed to keep the same (in the Act referred to as the registrar), and shall be of such a public nature as to be admissible in evidence on its mere production from that custody.

13. Every County Council shall, in every year, cause the register kept by them under this Act to be printed, published, and sold, and a copy of such register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act: Provided always, that in the case of any woman whose name does not appear in such copy, a certified copy under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

14. Any woman who wilfully procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person aiding and

assisting her therein, shall be deemed guilty of a misdemeanor, and shall, on conviction thereof, be liable to a fine not exceeding twenty pounds, or to be imprisoned with or without hard labour for any term not exceeding three months.

15. Any registrar who wilfully makes or causes to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanor, and shall be liable to a fine not exceeding fifty pounds, or to be imprisoned with or without hard labour for any term not exceeding twelve months.

16.—(i.) Any offence under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered in manner provided by the Summary Jurisdiction Acts.

(ii.) A prosecution for an offence under this Act shall not be instituted by a private person except with the consent of the Attorney General or of a County Council, but may be instituted by a County Council, or the council of a municipal borough, or by any board of guardians.

17. Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

18.—(i.) All powers vested in the Privy Council by this Act may be exercised by an order of any two or more of the Privy Council.

(ii.) Any order may be made conditionally or unconditionally, and may contain such terms and directions as to the Privy Council seem just.

19. In this Act—

The expression "General Council" means the General Council of Medical Education and Registration of the United Kingdom, established under the Medical Acts.

The expression "Medical Acts" means the Medical Act, 1858, and the Acts amending the same.

The expression "midwives' register" means a register of midwives kept in pursuance of this Act.

The expression "county" means an administrative county within the meaning of the Local Government Act, 1888, and includes a county borough.

The expression "County Council" and "county fund" mean respectively in reference to a county borough, the council of the borough, and the borough fund.

20. Save as in this Act expressly provided, this Act shall not extend to Scotland or to Ireland.

INCOME AND EXPENDITURE FOR THE YEAR ENDING DECEMBER 31, 1890.

Dr.		Cr.	
	£ s. d.		£ s. d.
To Balance	186 9 1	By Printing	117 18 1
" Subscriptions	386 0 2	" Illustrations	20 4 0
" Dividends :—		" Reporting	17 12 9
Grand Trunk Railway Consols at 4 per		" Stationery and Die Sinking	1 2 0
cent. Stock, £270	7 18 0	" Honoraria	63 0 0
Caledonian Railway Company, £5	0 4 0	" Rent	72 10 0
" Interest on Deposit, £200	5 16 1	" Refreshments	19 12 0
		" Attendance	3 0 0
		" Postage	5 19 6
		" Law Expenses	53 1 4
		" Furniture	76 18 0
		" Bank Charges	0 9 6
		" Unpaid and Returned Cheques	3 3 0
		" Balance	131 17 2
			<hr/>
			586 7 4

We have Examined the above Accounts with the Receipt Books and Invoices connected therewith, and find them correct.

January 7, 1891. Signed by { F. A. PURCELL,
H. MACNAUGHTON JONES.

REVIEWS.

On Severe Vomiting during Pregnancy. A Collection and Analysis of Cases with Remarks on Treatment. By GRAILY HEWITT, M.D.Lond., F.R.C.P., F.R.S.Ed., Emeritus Professor of Obstetric Medicine, University College; Consulting Obstetric Physician to University College Hospital; Past President Obstetrical Society of London; Honorary Fellow of the American Gynæcological Society; Honorary Fellow of the Obstetrical Societies Berlin and Boston; Fellow of the College of Medical Chirurgery, Philadelphia. London: Longmans, Green and Co.; and New York, 15, East Sixteenth Street, 1890.

Dr. Graily Hewitt has in this work presented to the profession a complete and exhaustive account of the different conditions which give rise to the distressing affection known as severe vomiting during pregnancy. His views on uterine pathology have long since been set before the profession and have to a large extent well stood the test of criticism. In the work before us, are set forth, in the clear and impartial manner characteristic to the writer, all the theories as to the etiology of the disease and all the methods of treatment employed for its relief. It forms an able summing up of the whole question, and coming as it does from one who is known as the author is, to have devoted much time and study to the subject, will be read with interest and profit by all medical practitioners.

In his preface the author says:—"The difficulty in explaining the occurrence of that severe form of vomiting liable to be associated with pregnancy, has hitherto proved to be considerable. Yet the solution of the difficulty must be

considered as one of great importance in view of the facts that :—(1) The malady is not seldom grievous in its effects, interfering with the proper nutrition of the body by cutting off the due supply of food, and giving rise to discomforts and disabilities of various kinds ; (2) That it is, sometimes, even fatal to the patient ; (3) That it occasionally renders it necessary to put an end to the life of the unborn child in order to save the life of the mother ; (4) That this latter object is not always even then attained, the operation for destruction and removal of the child being by no means free from danger to the mother ; (5) That even when the pregnancy is brought to an end and the immediate effects of the operation recovered from, the patient is liable to fall a victim to disease, presumably engendered by the protracted starvation and feebleness, results of the long-continued vomiting. The basis of the following Essay was a paper submitted by the author two years ago to the American Gynæcological Society. It contains a collection, mostly in abstract, of authenticated cases of severe vomiting during pregnancy, which have been recorded by various authorities during the last twenty or five-and-twenty years, the object being to arrange the data and cases available in such a form as to facilitate sound deductions in reference to the nature and treatment of the affection. As regards the cases given in abstract, great care has been taken to offer an accurate and unprejudicial account of them. Cases in which the condition of the uterus was not observed or not described are, as a rule, omitted. Certain conclusions regarding the nature and cause of severe vomiting during pregnancy seem to be reducible from analysis of the cases and observations here brought together. The author ventures to express his belief that these conclusions are in agreement with the natural history of the affection as illustrated by recited cases, and that they will be found to be justified by the success of methods of treatment based upon them."

Antiseptics in Obstetric Nursing. A Text-book for Nurses on the application of Antiseptics to Gynæcology and Midwifery. By JOHN SHAW, M.D., London. Member of the Royal College of Physicians, London; Obstetric Physician; late Senior Assistant Physician and Pathologist to the North-West London Hospital. London: H. K. Lewis, 136, Gower Street, W.C., 1890.

Dr. Shaw has produced an extremely useful guide to Antiseptics for Nurses in charge of puerperal cases. He gives illustrations of and directions how to use the different appliances and solutions required. The book will be most valuable to monthly nurses. All the chapters are good. Chapter seven is an excellent example of the thoroughness and careful attention to minute detail which are to be found in other chapters at the end of the book. It contains instructions special to antiseptic midwifery, what to prepare in the lying-in room, when douches are to be used, drainage and how it is facilitated, antiseptic care of the breasts and the prevention of cracked nipples and abscess, antiseptic principles in the interest of the infant, prevention of "thrush," cleansing of feeding bottles, the prevention of inflammation of the eyes in the newly-born, the dressing of the cord, antiseptics in the after treatment of vaccination, resumé of antiseptic rules for monthly nurses. Although the work appeals chiefly to monthly nurses it will be a most useful aid to the very general practitioner who wishes to become well acquainted with antiseptics in the puerperal state.

Electricity in the Diseases of Women, with Special Reference to the Application of Strong Currents. By G. BELTON MASSEY, M.D., Physician to the Gynæcological Department of Howard Hospital, Philadelphia. Second Edition; revised and enlarged. Philadelphia and London: F. A. Davis, Publisher, 1890.

This work gives a general review of electricity as used in diseases of women. All the instruments are figured and

explained, and the various methods of using them described. As far as we know, it is one of the best guides on the subject. We can safely recommend it as a trustworthy book of reference for those who wish to master the subject. The author has given an interesting selection of cases in which he has employed electricity. He says :—

“ In presenting to the profession what is believed to be the first attempt at a complete treatise on the electrical treatment of the diseases of women, the author deprecates in advance any misapprehension of its scope and claims. Only such conditions receive notice in the treatment of which electricity has recently been urged upon professional favour; and this portion of the work partakes, therefore, more of the nature of a mirror of the author's daily work than of a classical research into the literature of the subject. While the experience of others—particularly of Apostoli, Engelmann, and Laphthorn Smith—has been utilized as a guide and mentor, it is not forgotten that a scientific investigation takes nothing upon hearsay evidence, and that the profession demands proofs rather than theories. It should be stated, also, that the author does not wish to assume the position of recommending the routine use of any one agent or procedure, to the exclusion of other rational remedies, in the medical or surgical treatment of any single class of diseases. It was merely in the interest of clearness and accuracy that many of the cases mentioned in these pages were confined to electrical application alone, after beginning treatment with this remedy. In the introductory part of the work, a portion of which has been published in the shape of papers contributed to the *Philadelphia Medical Times*, the author has aimed to briefly present the laws of electricity as applied to this branch of medicine and surgery, in so concrete and practical a way that the conscientious student is insensibly made to comprehend current proportions, as he would after prolonged mathematical study; the aim being to make the medical user of electricity as intelligently familiar with this physical force as is now required of so many practical workers in its industrial

applications. It will be noticed that some electrical words peculiar to physicians are not found in the body of the work. This is particularly true of words terminating in 'ism,' such as 'galvanism,' and 'faradism'—words that, besides possessing an objectionable termination, fail to convey a distinct idea of the particular procedure that they are intended to describe."

The Dignity of Woman's Health, and the Nemesis of its Neglect. By ROBERT REID RENTOUL, Doctor of Medicine; Member of the Royal College of Surgeons, England; Fellow of the Obstetrical Society of London. London: J. & A. Churchill, 11, New Burlington Street, 1890.

In discussing the question of the onset of menstruation, Dr. Rentoul says:—"The chief points to pay attention to are these:—A girl when becoming a woman should not have any mental or bodily labour to perform. She should therefore neither study nor work, but have only good food, exercise, sleep, and clothing. If she accomplish the beginning of this important phase of her life with vigour and success, she will have secured one of the chief ends of her existence. I go so far as to say that if a girl, when at school, show any signs of approaching womanhood she should be taken home. What is the good of sacrificing health for the sake of 'grinding up' a little history, geography, or music? Which is likely to be of more lasting importance? If we make the basis of health as broad as possible, it will be all the more difficult to overturn it." We quite agree with Dr. Rentoul as to the importance of allowing young girls necessary time for rest during the strain she has to bear in the metamorphosis of her generative organs. Dr. Rentoul has produced an exceedingly sensible and useful book. It appeals to women and girls. We trust that the mothers into whose hands the book falls will benefit by the excellent advice given to her by the author. We can cordially recommend our readers to study this book.

**SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.**

The Nubile Age of Females in India Physiologically Treated.

By BOLYE CHUNDER SEN., L.M.S., Assistant-Surgeon
and Teacher of Medicine, Campbell Medical School.

PREFACE.

The subject is at present hotly discussed in the press through the Anglo-Indian, Indo-English and Vernacular papers, from different standpoints of view; but none that I am aware of, has taken the physiological one, which is the true rational basis on which alone we should take our stand and decide the matter; and that is why I have thought it desirable to publish the paper I read at the Medical Society on 10th September, 1890.

The evil effects of child-marriage on the offspring, I think, I have been able to prove to the satisfaction of all unprejudiced minds. The matter deserves the serious consideration of all who wish well of their country, and some change is necessary towards raising the age of marriage of our girls, especially when a similar change has already taken place in the case of our boys; for no father, educated or uneducated, thinks of marrying his son at an age which was usual in our younger days; but the practice, either for good or for evil, has disappeared from our society, perhaps never to return. So it becomes imperative on us to stir in the matter of raising the marriageable age of our girls, and I doubt not that good will result from the change, and will, after a time, be hailed as a blessing, as the abolition of *Suttee* and Infanticide at Gunga-Sagur has already been. History bears ample testimony how stoutly all these reforms were opposed except by a few

advanced thinkers amongst our countrymen, and how many are there amongst us now who would think with men of the past generation that the Government were wrong in not listening to the prejudiced mass.

People may think I am wanting in veneration to our ancient law-givers (Munnies and Rishis). No, I yield to none of my countrymen in my respect for them, for they are the monuments of India's glory and pride in her present degenerate days. Do I for a moment doubt that they were not wise? Certainly they were wiser than we are, for they had the courage to legislate for their own times; but would it be wise in us, and showing veneration to them, to act as they did, under altered circumstances; or would it not prove that we are not unworthy descendants of those great ancestors if we act as they would have done in our own times and circumstances?

There are a few debatable points in my paper which I could not clear up in my address for fear of being tediously long, but one of which I think it desirable to explain here somewhat more fully.

That child-marriage brings on degeneracy and deterioration of the race is an undoubted physiological fact, but the advocates of infant-marriage point triumphantly to the *physique* of the Punjabees, who, they assume, without a second thought, are the offsprings of child-marriage. I have never been in the Punjaub and so have no actual experience of their marriage system; but this much I can assure, that though infant-marriage is common all over India, early or premature consummation of marriage does not take place, as far as I know, anywhere except in weak, unfortunate Bengal! I need not dwell long on this point, for I think I have clearly shown in my address the effects of child-marriage even in European countries, and which the advocates of infant-marriage cannot controvert or deny.

MR. PRESIDENT AND GENTLEMEN,—Our learned President has done well, at this juncture, in bringing prominently to notice for discussion in our Society "The Nubile Age of Females in India," in his able paper read at the last meeting.

In a country like India, inhabited by different races, professing different religions, having different prejudices and predilections, and surrounded by different influences, it is no doubt very difficult to come to a conclusion that will give satisfaction to all or to a large majority of them; but ours is a comparatively easy task, as we confine ourselves only to the physiological and medical point of view, and merely show from our own, as well as from the experiences of others, what should be the marriageable age in this country, *i.e.*, when it should be consummated. We, therefore, do not tread upon the tender corn of infant marriage which prevails in this country. As medical men conversant with the laws of health, we should give our opinion, without fear, or hope of favour, not for expediency's sake, or in a compromising spirit, but boldly and emphatically what we honestly believe to be the dictates of science, in the interest of the teeming millions of this country. After puberty the female is capable of procreation, and so that is the age fixed by universal consent for marital union even in countries where infant marriages prevail. What is that age? To fix it, no doubt, is difficult, but let me quote a few well-known authors who may be considered authorities on the subject of puberty and menstruation. Carpenter says—between the thirteenth and sixteenth years; Foster—from the thirteenth to the seventeenth years of age; Landois and Stirling—from the thirteenth to fifteenth years. Dr. Fayrer has given statistics of twenty-seven girls in the Calcutta European Female Orphan Asylum who were all of pure European lineage. The earliest age was twelve years and two months in a girl born in India.

Four between 12 and 13 years of age.

Eight	„	13	„	14	„
Nine	„	14	„	15	„
Five	„	15	„	16	„
One	„	16	„	17	„

The second question which I have proposed to discuss is : Is it earlier in India than in colder climates? Foster is silent on the point, while Landois and Stirling say that “in warm

climates puberty may occur in girls even at eight years of age." Carpenter also says, "it is generally thought to be somewhat earlier in warm climates than in cold." Chevers in his *Medical Jurisprudence for India* says, from information supplied by the late Baboo Modhusoodun Gupta, that "according to Sushruta, the menstrual discharge begins after the twelfth, and ceases after the fiftieth year." According to that Indian gentleman's observations, "The females of this country generally arrive at the age of puberty after the twelfth year." "Menstruation at ten years is very uncommon; it probably does not occur in more than one or two instances out of a hundred females." "It is perhaps equally rare for it to be delayed beyond the thirteenth year." In Guy's *Forensic Medicine* I find that in Europe cases do occur where girls become pregnant even at nine years of age, not to say that a few, if not many, become mothers at twelve and thirteen.

From the above it may be concluded that menstruation may be earlier in India by a year or so than in colder climates, and if anomalies do occur here, they have their counterparts in colder climates as well, as I have shown before. Granting that it is somewhat earlier here than elsewhere, what may be the possible cause or causes for its occurrence? Child-marriage is the principal if not the sole cause of this. Young couples associating with each other, knowing their relationship, tends in a great measure to hasten early development of a function which, under other circumstances, would have been delayed to its proper time. Another cause is, that from early infancy boys and girls frequently hear from their parents and grand-parents about their marriage—about husbands and wives. Luxurious living is said to be another cause, and I may quote a passage from Dr. Chevers' *Jurisprudence*, in which the late Baboo Modhusoodun Gupta says:—"He believes that the catamenia appear sooner or later according to the mode of living of the females, and the sexual excitement to which they may be subjected, as he finds that the first menstruation of girls in good circumstances generally takes

place when they are eleven years old, even in some cases at ten years." Here I beg to say that what has been stated of girls of good circumstances is not generally true; for most of these first menstruations are generally fictitious ones, got up by the females of the husband's family, for the dancing and singing and feasting that follow the ceremony of second marriage. I can speak of two such instances from my own experience. Child widows, I am told, menstruate late in life, but I cannot vouch for the truthfulness of this. I may be charged for having omitted, what some may believe the most important cause, or in fact, *the cause*, for the early appearance of the catamenia in India, namely, climate. I may candidly confess that I am no believer in this doctrine, though I know full well that whatever evils have befallen individuals, or whatever abnormalities have been observed, have been erroneously put down to the climate. Allow me to quote here, Dr. Playfair, from his "Science and Practice of Midwifery." He says:—"Various accidental circumstances have much to do with its (menstruation's) establishment. As a rule, it occurs somewhat earlier in tropical and later in very cold, than in temperate climates. The influence of climate has been unduly exaggerated. It used to be generally stated that in the Arctic regions women did not menstruate until they were of mature age, and that in the tropics, girls of ten or twelve years of age did so habitually."

Now, let me submit for your consideration the following facts:—Is dentition earlier here than in England? Is the growth and development of the body earlier here than in other countries? Instead of being earlier, I believe they are later in appearance in this country, and that I believe to be the experience of every medical man who has paid any attention to the subject. Is menstruation the only function that appears earlier, while all other concomitant signs are later in appearance? I leave you to judge. Let us also take the case of the well-known domesticated animal, the horse, whose anatomy and physiology have been well studied by a special class of medical men—the veterinary surgeons. Do they find

any difference in the age of maturity, even in the purely country-bred horses or in the offspring of imported stocks? Certainly not; they cut their milk and permanent teeth and tushes at exactly the same age in this country as they do in England, and why? Because climate has no influence whatever in hastening or retarding the growth or development of animals, much less of man. This idea of the early development of everything under the tropics has probably got abroad from seeing the luxuriant vegetation that meets the eye of a foreigner from a colder latitude, who fails to observe "that man seems the only growth that dwindles here."

The next point is race, which, it is believed by many, exerts a great influence in promoting or retarding the appearance of menstruation in girls. "Raciborski," I quote Playfair again, "attributes considerable importance to the effect of race;" and he has quoted Dr. Webb, of Calcutta, to the effect that "English girls in India, although subjected to the same climatic influence as the Indian races, do not, as a rule, menstruate earlier than in England; while in Austria, girls of the Magyar race menstruate considerably later than those of German parentage."

I admit the premiss, but deny the conclusion drawn therefrom. Max Müller and other Orientalists have proved beyond the shadow of a doubt, that the English, Parsees, and the Indian Hindoos belong to the great Indo-Aryan family, and if the researches of these great men be true, Raciborski's theory falls to the ground. In the first place statistics on this point are very difficult to obtain; and secondly, is there any proof that the men that have made the assertion went beyond the surface of those communities, and made themselves acquainted with the inner workings of their society? We are, no doubt, apt, sometimes, in our blind reverence for authority, to accept authority for truth, and not truth for authority.

Dr. Playfair, with great truth, says that "the surroundings of girls, and their manner of education and living, have marked influence in promoting or retarding its (menstruation's) establishment; premature sexual excitement is said

also to favour its early appearance, and the influence of this among the factory girls of Manchester, who are exposed in the course of their work to the temptations arising from the promiscuous mixing of the sexes, has been pointed out by Dr. Clay." So you see, gentlemen, the difference in undeniably the same race, is not from luxurious living or novel reading, but merely from premature sexual excitement. What wonder, then, that our child-wives should menstruate before their time!

Here I may make a passing remark that both Raciborski and Dr. Clay give direct support to my view that climate has no influence on the early appearance of menstruation. The following statistics, that I have been able to collect from the Brahmo community, through the exertions of two of my lady pupils, will not be uninteresting. It clearly shows that when marriage is deferred, menstruation does not occur early. The

Below 12 years.	12	13	14	15	16	After 16.	
2	3	29	26	4	1	...	

above Table strongly supports my contention that it is sexual excitement *only* that brings on what may be called *forced menstruation*. Out of a total of sixty-five, fifty-nine menstruated between the ages of thirteen and sixteen years. I am also indebted to Dr. Docoury Ghose for the information that amongst the Brahmos and Native Christians the average age of menstruation is thirteen years six months. Very few have it below twelve, while some may have it as late as after sixteen. I myself know of two instances in our own community where the menses were delayed beyond the sixteenth year, and the parents of their respective husbands were afraid lest the girls should turn out to be hermaphrodites.

Dr. Docoury Ghose, who is one of the registrars of marriage amongst the Brahmos, informs me that though the Act of 1872 prescribes fourteen years as the limit, yet marriages seldom take place under sixteen years. In his experience of

thirty-three marriages, eleven brides were under sixteen, and the remaining twenty-two were above that age. In the experience of another registrar, out of twenty-three marriages, five girls were under and eighteen above the age of sixteen.

The next point that I mean to discuss is—Is it desirable, in a physiological point of view, to have a girl subjected to sexual intercourse, and be saddled with conception, parturition, and lactation on the first appearance of menstruation? As medical men we cannot for a moment agree to the proposal; for we know full well the time required for the growth and development of the body. It is twenty-five years, and some even believe it to extend to the thirtieth year for its completion. The first appearance of menstruation, even in its natural course; not hastened by hot-house manipulation—child-marriage, is merely an indication that the girl is at best on the threshold of womanhood, and several years are still required for this new state of things to settle down and arrive at a certain degree of maturity. Moreover, it is at this period that there is a great demand on the system for the rapid changes that take place in the constitution. And it is about this period that the supply, failing to keep pace with the demand, develops in many an instance, without any extra strain, any constitutional or hereditary disease lying dormant in the system. Now let me quote a passage from Carpenter which has a marked bearing on the subject. He says:—"It is merely requisite to add, that this augmented development can only be rightly regarded as preparatory to the exercise of these organs (genital organs), and not as showing that the aptitude for the exercise has already been fully attained. It is only when the growth and development of the *individual* are completed, that the procreative power can be properly exerted for the continuance of the *race*; and all experience shows that by prematurely and unrestrainedly yielding to the sexual instincts, not merely the generative power is early exhausted, but the vital powers of the organism generally are reduced and permanently enfeebled; so that any latent predisposition to disease is extremely liable to manifest itself; or the bodily

vigour, if for a time retained with little deterioration, early undergoes a marked diminution." I have met with many instances of this kind in my own experience, and I doubt not that is the experience of most medical men.

Sexual intercourse and delivery bring on nervous exhaustion we all know, and it may be in the recollection of many that there is a class of insects, the name of which I now forget, in which the nervous exhaustion is so great that the male dies after copulation and the female after laying the eggs.

Will anyone now have the hardihood to say that the first appearance of the catamenia would be the proper time to throw extra strain on the poor child's health by sexual-intercourse, and by the sustenance of another being within her; and further to undergo the process of delivery (second birth) which our countrymen and especially countrywomen believe confinement to be, with the burden of lactation, on a constitution already enfeebled and debilitated by previous sufferings, loss of blood, &c. ? In many an instance this proves the last straw on the camel's back; so I believe the Spartan law-giver Lycurgus was not wrong in fixing the marriageable age of Spartan females at twenty, for the perpetuation of a race worthy to uphold the Spartan name and fame.

Again, those that have taken any pleasure in gardening, and there are many, I believe, in this assembly who must have observed that young plants are not allowed to fructify—the blossoms of a young plant or graft are always removed for the first year or two at least to allow them to grow strong, before they are permitted to bear fruit, and why? Because otherwise the growth and development of the plant will be arrested, and it will never become a strong and vigorous tree. Now, gentlemen, when we are so considerate and tender in our treatment of plants, should we be less so to our own race, nay, to our nearest and dearest ones, our very daughters and sisters ?

The next point for consideration is—What evils befall the female when thus subjected ?

It cannot but be the experience of most medical men that have any practice in the diseases of females, that dyspepsia, phthisis pulmonalis, neuralgia, displacements of the womb, menorrhagia and premature decline and death are the most common consequences of early conception, if spared from convulsions and flooding during confinement, which is generally but not invariably tedious in character and attended with considerable danger, and would have been more so, I believe, to both the mother and child had the foetus been as well developed as is the case with the children from the union of parents of mature age. This is a point on which I am not in a position to offer a positive opinion, but leave it to men who have carefully studied the subject. Here I may give you the statistics of twenty-one cases of conception at an early age supplied to me by my friend and colleague, Dr. Doyal Chunder Shome, Teacher of Midwifery. He says: "I give you the result of twenty-one cases of labour between the ages of eleven and thirteen; ten of these cases were under my immediate care, and I had the general supervision of the other eleven. Of the above twenty-one cases, natural delivery took place in five, tedious delivery with five, still-born children in eleven, and instrumental interference with the forceps was required in the remaining five cases, with the result of four living, and one still-born child being born." He goes on, "You see therefore that out of the twenty-one cases, as many as sixteen were cases of tedious and instrumental labour, and this in spite of the children not being unusually big. The delay was simply due to want of regular and strong contractions of the uterus, and the incapability of the imperfectly developed natural parts to dilate properly for the passage of the foetus.

"Most of the child-mothers kept tolerably good health after their first confinement, two of them only suffered from fever, and continued weak and anæmic, but many of the others fell victims to various diseases after the second or third confinement. I saw five of them dying of pernicious anæmia after prolonged sufferings from fever and diarrhoea, and two died of phthisis.

"The only conclusion we can arrive at from the above statement is that parturition at an early age is more tardy than in grown-up women, that children of ill-developed parents either die early or grow up in indifferent health, that child-mothers suffer from various diseases on account of the strain on their constitution, and many of them die at an early age from anæmia, phthisis, or some similar disease."

European gentlemen, have you heard a proverb common amongst us () that a female becomes an old woman at the early age of twenty years, shorn of all her beauty and partly of her bodily strength; while in countries where happier marriage laws prevail, females at that age are in the full bloom of beauty and vigour, and that is the age that Lycurgus not unwisely fixed for the marriage of Spartan girls?

What are the effects on the offsprings from child-marriage and thereby on the race generally? Apart from the diseases that arise from inherent weakness in the children, such as refusing the breast, &c., we find diarrhoea, dysentery, enlarged liver, general inanition, capillary bronchitis, phthisis, and others; and if spared in their earlier years from the inroads of these diseases, diabetes comes in to claim them as its own in maturer life. Gentlemen, you may laugh at what you may consider a quixotic idea, but nevertheless I am reluctantly led to this belief from the fact that diabetes is more common amongst the Bengalee Hindoos, than amongst any other race inhabiting this or any other part of the country, and why? Because early consummation of marriage is more common in civilised Bengal than in the less advanced parts of India. Here let me again quote from Dr. Shome's paper. He says: "I have said above that fifteen of the twenty-one children were born alive, they did not look small or undeveloped when born, but their subsequent growth was not satisfactory, one died of infantile tetanus, two of marasmus within two months after birth, two of diarrhoea within five months, and three during dentition, of fever and convulsions, the remaining seven grew up to be weak and delicate children."

Besides what has been stated regarding the diseases that

naturally affect the offspring of child-marriage, the effect on the race cannot but be deplorable in the extreme ; and for the proof of this you will not have to go far, for you have living specimens in this very room, and in this very assembly, who will prove to your entire satisfaction what sad havoc it has made in our own community. Children of the soil incapable of sustained hard work as can be done by the sojourners from a distant cold climate, and if Keshub or a Kristo Dass rises above his race to emulate his Western Aryan brethren, the grave yawns to engulf him before he reaches maturity, and thus puts an early end to his sublunary career ; or if a Vidyasagur or a Rajendra Lala attempts to soar high, he soon breaks down, and his powers are marred by physical disability and mental incapacities.

European gentlemen, look at your own bones and muscles, and compare them with ours, and say what degeneracy and deterioration have taken place in men that have sprung from the same stock. The reason is not far to find ; for you all know that for centuries, generation after generation has been produced from imperfect and immature seed, and nursed in ill-developed nestling ground ; climate has been credited with all the physical disabilities of our race, but I have shown you before that climate has no appreciable influence whatever, though it may be an atmosphere of "constant vapour-bath." I shall now quote from Chevers to show the evil effects of child-marriage in other climes. "It is mentioned in Abal-dinis' description of England in 1551, given in Raumer's History of the Sixteenth and Seventeenth Centuries, that the people in general are tall of stature, the nobles in great part little, which comes from the prevalent customs of marrying rich damsels under age." He states in another place : "It is interesting to contrast this with the observation of another stranger made in 1835. The Paysans of France and the Contadini of Italy are physically far superior to their degenerate masters ; while the nobility and gentry of England differ from the peasantry, in limb and feature, as the racer differs from the dray-horse or the grey-hound from the cur."

"The delicacy of Henry the Seventh's constitution has

been attributed to the (alleged) fact that his mother, Lady Margaret Beaufort, was married when only nine years old, and that she was only ten when Henry was born."

These facts that I have quoted are sufficient to prove to any unprejudiced mind, the evil effects which child-marriage exerts on the constitution of the offspring and on the race generally, irrespective of climatic influences; and that the removal of the blot from the statute-book of the land will effect a salutary change, as evidenced by the above facts.

Child-marriage is a great obstacle to enterprise. Commercial Bombay beats hollow intellectual Bengal. The Parsees excel every other race inhabiting this vast continent, and approach more and more to Englishmen in this particular character, while Bengal lags far behind. Consummation of marriage, I am told, is unknown amongst the Parsees before the age of fourteen, though early betrothals are not uncommon.

And now we come to the last and most important point on which we have to come to a decision, and that is—What should be the minimum age of consent and what the minimum marriageable age? The question had been threshed out by our countrymen before the Brahmo Marriage Act was passed in 1872; and I can do no better than subjoin a table showing the age which eminent medical men, European and Indian, thought most conducive to the well-being of the Indian community.

Names.	Minimum marriageable age.	Proper age.
Dr. Chunder Coomar Dey	14 years.
Dr. Charles	14 "
Babu Nobin Krishna Bose, Khundwa	15 "	18
Dr. A. V. White, Bombay	15 or 16 years.	18
Dr. Mohendro Lal Sircar	16 years.	18
Tumeezkhan, Khan Bahadoor ...	16 "
Dr. Norman Chevers... ..	16 "	18
Dr. D. B. Smith	16 "	18 or 19
Dr. Ewart	16 "	18 or 19
Dr. J. Fayrer	16 "	18 or 20
Dr. S. C. G. Chuckerbutty ...	16 "	21
Atmarang Pandurang, Bombay ...	20 "

The opinions of some of these gentlemen will not, I hope, be unacceptable to you for our guidance in this momentous question.

Dr. Chevers said: "For the sake of safe child-bearing and healthy offspring, marriage ought to be seldom allowed till the eighteenth year, the sixteenth being the minimum age in exceptional cases."

Dr. S. C. G. Chuckerbutty says: "It is a vicious custom that as soon as a girl menstruates she must be married. This is not done in any civilised country, nor should it be done here. The practice of abstinence, which the deferment of marriage imposes on a girl, is more beneficial to mankind than its reverse in early marriage."

Dr. D. B. Smith says: "Before the age of sixteen a female cannot be said to be fully developed. Some parts of her osseous structure, which are essential to the reproductive function, are not consolidated. A female may conceive before she has even menstruated, and infants have been known to menstruate. The stomach digests, the brain elaborates thought, the voice gives utterance to such thought, long anterior to the time at which these functions are performed with full force and physiological perfection. The appropriate period for marriage is a few years after a girl reaches her puberty."

Dr. Nobin Kisto Bose says: "Our girls should not be married before they have attained at least the eighteenth year of their age. Before this period their system would not bear with impunity the drain which maternity must establish on it."

Dr. White says: "If marriages were delayed until the eighteenth year the danger of child-bearing would be lessened, and healthier offspring would be secured."

Dr. Mohendro Lal Sirkar says: "It is a grievous mistake to suppose that the female who has just begun to menstruate is capable of giving birth to healthy children. The teeth, no doubt, are intended for the mastication of solid food, but it would be a grievous error to think that the child the

moment he begins to cut teeth will be able to live upon solid food. A host of complaints from which our females suffer life-long, or to which they fall early victims, arise from the evils of early marriage, namely, early pubescence and early maternity."

The late lamented Baboo Keshub Chunder Sen in his Town Hall speech, said:—"The Medical Authorities in Calcutta unanimously declare that sixteen is the minimum marriageable age of girls in this country. Dr. Charles makes a valuable suggestion. He holds that fourteen, being the commencement of adolescence, may, for the present, be regarded as the minimum age at which Native girls may be allowed to marry, and may serve as a starting point for reform in this direction. In conformity with his suggestion and the opinions given by other referees, we have come to the conclusion that, for the present at least, it would be expedient to follow the provision in the Bill which makes fourteen the minimum marriageable age of girls in this country, leaving it in the hands of time to develop this reform slowly and gradually into maturity and fulness."

So you see, gentlemen, that the matter has been already definitely settled by the progressive Brahmos—they, as a tentative measure, adopted fourteen years as the marriageable age of their girls, and in the course of only eighteen years there is a growing desire in that community to raise it to sixteen, and they have become so well convinced of the beneficial effects that have resulted from it that a case has accidentally come to my knowledge where a girl over fourteen years has been betrothed, but marriage has been deferred till the completion of her sixteenth year. Such good sense cannot generally be expected from other sections of the Indian community.

In India, however strong the medical opinion, and however stringent the laws may be, they will be honoured more in the breach than in their observance; while in the healthier atmosphere of England, people generally go far beyond the limit prescribed by law, and here the Parsees are the only

people that follow it with few exceptions, as the following statistics will show :—Fifty-seven marriages took place at and after twenty, 17 at nineteen, 18 at eighteen, 20 at seventeen, 20 at sixteen, 19 at fifteen, 7 at fourteen, 10 at thirteen, 4 at twelve, and 6 at eleven, so that out of 178 marriages only 20 took place before fourteen; but amongst them though marriages or rather betrothals may take place at an early age they are never consummated before the age of fourteen or fifteen. This to my mind accounts for the prosperity of, the Parsee community.

I therefore exhort my Indian medical friends to throw aside for a time all preconceived ideas imbibed on the subject from early association, love for our time-honoured customs and veneration for our ancient lawgivers, and fix an age that shall stand the test of time founded on the rock of scientific truth, unswayed by motives of expediency or compromise and undismayed by fear of obloquy.

I need say nothing to the European medical gentlemen for they will be by instinct, education, and association, advocates of an age much above our highest ideal, and if Dr. McLeod has proposed the age of legal protection to be raised from ten to twelve only, he has done so, I feel sure, purely out of deference to Indian public opinion, and not from conviction. Here I may bring to the notice of our learned President that I cannot reconcile the statement made by him that it is held by law to be felony in England to have sexual intercourse with a girl below the age of fourteen years with that given in Lyon's Medical Jurisprudence for India, page 22, where it is stated that "in England sexual intercourse with consent is rape up to the age of thirteen, and between the ages of thirteen and sixteen, although not rape, is an offence." I have thought it my duty to bring this to notice for clearing up the point, but it matters not what the law is in England; for what we have come to know from the statistics I have placed before you of the Brahmo community and from the general impression amongst Brahmos and Native Converts is, that the average age at which menstruation occurs

amongst their girls is thirteen years six months, and so it is but "reasonable and right" that the age of consent should be raised from ten to fourteen years at least, and we should reassert with strong emphasis with the weight of this Society's opinion that the minimum age of marriage for Indian girls should be the same as that held by Dr. Chevers and others some eighteen or twenty years ago—namely, sixteen years. I would have gone in for a higher age than sixteen, had I not been hampered by the knowledge that that is the law in England. This law if passed will not go against infant-marriage, but against its consummation before the prescribed age. The country is at present convulsed with this all-important subject, and pressure is likely to be brought to bear on the Government to alter the existing law on the point. Rumours, however, are afloat that the age of twelve is likely to be fixed by the Legislature for protection, but we should be wanting in our duty as Natives of India should we not protest against it as unscientific, injurious and detrimental to the well-being of the Indian population, even in a purely physiological point of view, irrespective of other considerations, which no doubt have a great bearing on a nation's prosperity, and if what we hear comes to pass we shall have this satisfaction that we have done our duty to our country regardless of any other consideration than our country's good.

Twenty Consecutive Cases of Laparotomy for Diseased Uterus, and Appendages. E. SINCLAIR STEVENSON, F.R.C.S.E., ETC., ETC., ETC.

You will see that out of twenty cases, of which the accompanying table gives a *résumé*, two died—Nos. 8 and 18. The first was a case of large Œdematous Myoma, almost filling the abdominal cavity, and firmly adherent to important organs; the patient died from shock two hours after the operation. No. 18 had a large fibro-cystic solid growth with a twisted pedicle. The whole tumour was almost black; the pedicle so twisted

that its calibre was about the size of a pipe stem. There were no adhesions to speak of; no difficulties. The patient sank on the fifth day, with large acute bed sores, but no other symptoms.

Two cases—Nos. 4 and 9—were twice operated upon. The first was for the removal of the right ovary, which had been left unremoved. No. 9 for acute peritonitis and intestinal obstruction, supervening twelve days after an operation for the removal of diseased appendages. Both recovered and are cured.

No. 6 was unfinished, permission to operate only being given on condition that no unnecessary risk was run. The adhesions were so formidable that things were left as they were.

No. 20 was operated on five months ago, and, although much better, no correct prognosis can be given in so short a time.

The operation on No. 11 was performed shortly after labour, for Hæmato-salpinx and recurrent peritonitis. Blood was found in the pelvic cavity escaping from the corresponding ovary. No 11 recovered after developing a fæcal fistula and tetanus.

No. 17. This was a case of hæmorrhage into the left broad ligament, causing great pain, and distending it to an enormous extent. The tumour was sewn to the abdominal walls, as a precaution against further complication. The blood became gradually absorbed, and pain ceased immediately after the operation.

No. 19 has no clinical interest further than the great size of the tumour, which contained no less than six gallons of thick fluid.

No. 20. During the operation for diseased appendages the adhesions were found to be so firm that, though all possible care was taken, the ascending colon was torn in two places and sewn with silk. Four days afterwards she passed a liquid motion, and on the sixth a solid natural one.

The uterine appendages were removed for bleeding Myomata on two occasions. In both cases the patients were blanched from loss of blood, and in both the operation was thoroughly successful in stopping the hæmorrhage and in reducing the

growth of the tumours. In two other cases the appendages were removed for Fibroids causing much pain. In both the menstruation was arrested and the pain much relieved.

In one case only the removal of the appendages was performed for Dysmenorrhœa and Menorrhagia ; these symptoms completely disappeared after the operation.

When the appendages—that is the ovary and tubes, were entirely removed, in every case the menstruation was stopped. All the cases where the appendages were removed for pain and hæmorrhage had undergone different kinds of treatment before they were operated on as a *dernier ressort*. In two cases the operation was unilateral from choice, both being young patients and anxious to have a family.

In only one case a hernia developed in a very slight degree, and it occurred where the incision had been very small—one and a half inches. Curiously enough, in the case where the fæcal fistula supervened, and where all the stitches gave way, no hernia followed.

ANNALS OF GYNÆCOLOGY.

Prolapse of the Ovary. By ALEXANDER DUKE, M.D.

One of the most distressing and painful complaints to which the human female is liable is that of prolapse of the ovary. The commonest displacement, as that which gives the most trouble as a rule, is generally backwards and downwards into Douglas's space, and is most frequently found in conjunction with retroflexion or retroversion of the uterus, and is more familiar to the gynæcologist than the other forms of displacement. The ovary, enlarged from structural disease, becomes congested and tumefied, more especially at or near a period, and a sudden fall or violent exertion, combined with a lax condition of the broad ligament, allows that organ to sink by degrees, till the pain produced by the action of the bowel (more especially when allowed to become confined) is the first thing to direct the patient's attention to the complaint, and soon compels her to seek relief. Byford states "that the

intimate and firm ligamentous connection of the ovaries with the fundus of the uterus causes them to partake of the changes in the position of that part of the organ. Thus, when the fundus rises into the abdomen during pregnancy, the ovaries are carried up with it.

When the complaint has been of some duration the ovary will easily be detected by the pain and feeling of sickness complained of by the patient when touched or pressed upon by the finger of the examiner, and which almost always makes the diagnosis unmistakable.

When the prolapsed organ is held down by adhesions or a retroflected uterus, it becomes a difficult matter to treat the case satisfactorily.

My own experience leads me to think that this affection is often overlooked, the flexion or version diagnosed only, and a pessary introduced, which, as Byford says, "is pretty sure to cause pressure upon these sensitive organs, and soon become intolerable." My object in writing this paper is to call attention to the importance of examining more closely in all cases of retroflexion (more especially of long standing) for a prolapsed ovary before inserting a pessary, which may do more harm than good; certainly add to the patient's distress, and bring discredit on a valuable instrument. Examination per rectum in these cases is most important, the ovary can be more distinctly felt, as the examining finger can reach higher, and the organ can be palpated by a finger in both passages if necessary. The treatment I adopt in these cases is the following:—

I place the patient in the knee-elbow or knee-chest position, and the vagina being kept open by the duck-bill speculum, the gravitation of the uterus forwards, assisted considerably by the atmospheric pressure on vaginal roof will (if the ovary be not bound down by adhesions) move upwards and out of reach of the examining finger.

If a Thomas pessary (which is the one I prefer) be chosen, of suitable size and fixed *in situ* so as to fill the roof of vaginal posterior *cul-de-sac*, the ovary cannot possibly regain

its vicious position, and by keeping the bowels regular, and restoring the general tone as much as possible by common-sense treatment, the patient will certainly be relieved, if not completely cured.

When we find the ovary bound down by firm adhesions, which will not give way under the influence of massage, and the patient's life becomes a burden, it is our duty to consider the removal of the offending organ, which, as a rule, is not a difficult operation, in this displacement easy access being had through posterior part of vaginal roof. The organ being drawn down by ovum forceps, a ligature is passed round the pedicle and tied, and a scissors completes the removal. The incision should be left open for drainage; no necessity for sutures; vagina well syringed directly after the operation, and the rest left to nature.

Uterine Hæmorrhage a Week after Labour.

Dr. MENSINGA (*Der Frauenarzt*, October, 1890) observes that Klotz has recently described two cases of intra-uterine hæmorrhage where the vagina had been plugged; one ended fatally, whilst the other was saved with difficulty. Dr. Mensinga believes that this accident is more frequent than is supposed, some fatal cases being registered as death from some other cause, others being recognised but not recorded. He was called in last March to a robust woman, who had given birth to a large male child a week previously. The placenta came away entire, and there had been no fever. The patient had suddenly been attacked with hæmorrhage. The uterus was of the size of a man's fist; the vagina contained masses of clot. The os admitted the finger; no fragments of placenta could be felt. The colpeurynter was introduced, and the flooding ceased for a few hours; then it came on again, and the patient became very feeble. The hand could be passed into the uterus; clots were turned out, and with his left hand Dr. Mensinga introduced the colpeurynter, using the right hand already in the uterus as a guide for its introduction. The instrument set up uterine contraction. Next

morning it was removed, and a Sims's speculum was introduced. The uterus was drawn down by a volsella, and by means of speculum forceps its cavity was plugged with a double strip of iodoform gauze, two inches and a half broad and a yard long. The forceps was apt to pull out the gauze when withdrawn for the introduction of more of that material. So, holding the uterus firmly by the volsella in the left hand, Dr. Mensinga let go the forceps, took up a sound in his right hand, and pushed it between the blades of the forceps, so as to disengage the gauze. The nurse held the speculum in one hand and the roll of gauze in the other, whilst it was being gradually introduced. By the above arrangement the plugging was effected with facility. The vagina was also packed with gauze. The entire plug, uterine and vaginal, was removed at the end of forty-eight hours. No more bleeding ensued. The further course of the case is reported as aseptic; but mastitis occurred in the lower part of the left breast, and five small abscesses formed in succession and broke. Dr. Mensinga has seen two similar cases in his own practice. The first he saved, the second was not seen by him until she was moribund. The vagina had been plugged by the midwife, who had acted according to official regulations in *post-partum* hæmorrhage.

Gynæcological Cases Treated by Electricity.

Dr. W. FRASER WRIGHT after relating twenty-three cases treated in Professor Simpson's Clinique by Electricity, arrives at the following conclusions:—

1. There are twenty-three cases in all, and in each the constant current has been employed, necessitating 304 applications. Of these forty-one were punctures—always negative; 125 were positive intra-uterine cauterizations; 103 negative intra-uterine cauterizations; and thirty-five vaginal applications with non-metallic electrode.

2. Eight cases were hæmorrhagic fibroids; seven were treated by positive intra-uterine applications; and one by negative puncture, as it was impossible to get a sound into the uterus.

3. In all but one the hæmorrhage was arrested, and the improvement maintained for at least a year after treatment. For this one exception a distinct and satisfactory cause was found.

4. It therefore appears that hæmorrhage may be diminished by a form of application other than positive cauterization, more observations being required on this point.

5. There were three cases—four really, if we include one of the hæmorrhage cases—in which pressure symptoms especially connected with the bladder functions, required treatment. All were greatly benefited, the improvement being apparently permanent.

6. Next there is a group of fibroids in which pus, especially at the periods, is the chief symptom. These seem to have not at all benefited by the constant current either physically or symptomatically (perhaps with the exception of one, which was slightly improved). These were mostly subperitoneal and were treated by negative intra-uterine applications.

7. Of these sixteen fibroids treated in no case was the tumour entirely removed ; but in eleven there was a diminution in size. In one only was this to any great extent, the amount of diminution in the others being insignificant, though appreciable to the touch ; five were entirely unaffected, except that no increase in size could be detected. In two of these five the symptoms were relieved, and permanently ; in the other three there was no relief.

8. The kind of application made no difference, so far as diminution in size is concerned, *i.e.*, whether positive intra-uterine, negative intra-uterine, or negative puncture. In some the diminution was apparent after a few applications, in others not till several months had elapsed after cessation of treatment.

9. Obstinate cellutic deposits were removed by the constant current, but it appeared to have little or no effect on peritonitic adhesions.

10. In one case of subinvolution, where pain was a source of constant anxiety, the pain was relieved ; but no effect

was produced on the size of the uterus by negative intra-uterine applications.

11. One case of pathological ante flexion with endometritis, which had resisted other remedies, was much improved symptomatically, but unaltered physically, by vaginal applications.

12. All patients, whether the pelvic condition was improved or not, felt much better in their general health after a few applications.

This, then, is the sum total of the whole—that symptoms caused by fibroid tumours were almost always relieved, at least hæmorrhage and pressure symptoms, while the tumour itself was diminished in size, and perhaps had its growth arrested ; but to verify this more time must be allowed to elapse. Unmistakably, also, the constant current was found a powerful agent in causing the absorption of cellulitic exudations. I believe this will yet be found to be one of the most important indications for its use.

Further than this, from personal trial, I am unable to go ; but desiring to see for myself how things were worked at the fountain-head, I went to Paris just after finishing this series of cases, and regularly attended for the space of three months the cliniques of M. Apostoli. It would take too much time to give even a short account of all I saw there ; but I take this opportunity of recording the great obligation I am under to M. Apostoli for his great kindness and courtesy, and for the trouble and inconvenience he was always so willing to undergo for the purpose of explaining his methods. In the main I found that I had been pursuing exactly the same method in so far as the kind of application went, but at his clinique the variety of cases treated was very great. Here it would be out of place to criticise the cases, as they have not yet been published, but on the whole the results he obtained were so far exactly as I am pleased to be able to corroborate. Other cases—such as salpingitis, endometritis, &c.—were treated very successfully, but these could, I am sure, have been equally benefited by less tedious and difficult

means; but I was much struck by the beneficial effect of Faradic applications for ovarian pain.

And now it seems that the constant current must take a place in the treatment of some very important gynæcological affections; its efficacy in relieving the distressing symptoms of fibroids is a fact about which all who have given the remedy a fair trial agree. What place must we then assign to it? It is plain that simply because it can arrest hæmorrhage it is not to be used in all bleeding fibroids, as most of these are effectively treated by ergot and like drugs. But some will fail to be cured medicinally. Such were the eight cases I have recorded to-night. For these a few years ago there was nothing left but operative interference; but now it has only been necessary to operate on one. And this is precisely the sphere in which the new treatment will find its greatest usefulness—in diminishing the number of fibroids requiring operation, for some of a surety must still require the surgeon. As a hæmostatic, then, it should be ranked with ergot; but with this great recommendation, that many cases unaffected by the drug will be cured by the current.

True, it is very troublesome and tedious, much more so than any surgical operation. Such is the opinion of those who ought to know; but I cannot help thinking that any treatment whatever, no matter how tedious to the practitioner, if successful, is better gynæcological practice than an operation for removal either of the appendages or of the uterus itself which must always be done with great reluctance, and only because everything else has been tried. If electricity has not, then everything else has not been tried. And here it is that the question of mortality has been raised. I can scarcely conceive that the mortality attending this new method of treatment can ever be compared with even the best operative statistics. Here especially it is necessary to have a full record of the fatal cases, so that one may see how much blame is to be attached to the method and how much to the operator, for several deaths, generally supposed to have been caused by electricity, have, when inquired into closely, turned out to

be due either to carelessness or ignorance, or to be merely accidentally associated with the electrical treatment. Thus it becomes important not only to have statistics or results, but also details of cases—the working out of results—so that each one may see and judge for himself.

In the second place, it is clearly indicated as a means of treatment in all cases where the tumour blocks the pelvis, causing pressure symptoms. Here there is nothing—absolutely nothing—that can for a moment compare with the electrical treatment.

Beyond these two classes of fibroids I am unable to proceed. It may be that as the method becomes more fully developed, it will be found useful in other cases. As yet there seems little evidence of this.

Now we pass to another group of cases—cellulitis—for which the constant current seems destined to hold a high place as a remedial measure. Here, again, many (but I do not think most) cases get well with ordinary antiphlogistic treatment. But those that do not, can nothing be done for them? Happily, as these cases show, we have still a powerful means at our disposal in the constant current. I am sorry to say I have not had such a happy result with peritonitic adhesions.

Many other pelvic conditions may be best treated by the constant current. Of these I have not had enough experience to speak with certainty. There would appear, however, to be some cases in which, after ordinary remedies have failed to relieve, the constant current has the desired effect, so that it should always be kept in mind as a possible necessity.

I would like next to make a few remarks about the *method of procedure*, and about the *rationale* of the treatment.

The Method of Procedure.

Into this part of the subject I do not propose fully to enter. It is already sufficiently understood by all. But a few practical points that have cropped up from time to time may be useful.

The intra-uterine applications are nearly always made with a platinum electrode. But for hæmorrhagic cases which are not improving, or where the uterine cavity is expanded, so that the whole mucous membrane may not be cauterized by the platinum, *Apostoli's graduated carbon-pointed electrodes are indispensable.*

For puncture, steel trocars are used. Apostoli lays down the rule—1st, *That punctures should by choice be made when a portion of the tumour presents through the posterior fornix, and always of necessity when it is impossible to pass a sound into the uterus*; 2nd, *That punctures should never be made except through the posterior fornix*; and, 3rd, *The needle should be pushed into the tumour to the extent of only half an inch.* Sometimes I found that there was a distinct cellular deposit round the tumour, and that if by chance the trocar did not pass beyond this, great pain was caused by the application. Generally, a feeling of greater resistance will tell the operator when the tumour is reached; and it should be punctured to the depth of half an inch. These applications are generally negative, but may be positive if the negative ones are too painful.

Sometimes—as when we wish to cause the absorption of an exudation—the internal electrode is in the vagina, and not intra-uterine. In this case its end is covered with cotton wool, to prevent cauterization of the vaginal mucous membrane. As it is, care must be taken not to use too high an intensity—50 m μ . or less is quite sufficient—lest a shrinking and corrugation of the mucous membrane result. The vaginal electrode is generally made negative; but it is the effect of the interpolar current which is desired.

Punctures, as a matter of precaution, are better made not oftener than once a week, by which time the previous wound is almost healed. Some puncture oftener, but I think it is attended with risk. Other applications may be made about five times in the fortnight.

With regard to the flat inactive abdominal electrode, which Apostoli still makes of sculptor's clay covered with tarlatan, I

have made use of a form originally devised by Engelman of St. Louis, viz., a plate of perforated zinc alloy, on which is quilted, about an inch thick, ordinary absorbent cotton. This is steeped in a warm, weak saline solution, and wrung dry just before application. Engelman advised that no salt should be put in the water, but this is a mistake. This form of electrode, like many others, is quite as good as the clay one, and far less disagreeable to the patient, as it is warm and clean.

Antiseptic douches should be used before and after each application.

I did not find a rheostat necessary, as the patients were quite able to bear the addition of one cell at a time.

It is well also to remember the caution with which all external measurements should be accepted as an indication of the size of a tumour. They must always be combined with bi-manual examination.

So, too, measurements of the uterine cavity with the sound are apt to be very fallacious, and, alone, cannot be taken as evidence of the size of the uterine mass. This is owing to the great difficulty often experienced in passing the sound the whole way. It is a point also referred to by Dr. Keith.

No great knowledge of electricity is required in making these applications. Of course, an acquaintance with the elements of electricity is necessary. Ability to make an accurate diagnosis, the requisite manual dexterity, such as is required for ordinary gynecological manipulations, and a knowledge of what the electrical current is capable of doing, so that the proper kind of application may be made in each particular instance—these are absolutely essential.

Danger.

The alleged danger of these applications I have not seen. With ordinary care, and with antiseptic precautions, there appears to me to be no danger whatever. Some cases may require to remain in bed during the treatment, but the great

majority can come for applications, and after resting for an hour or so walk home with little or no inconvenience. Some of my cases came regularly a two or three hours' journey by train, and went home again after each application.

Septicæmia, as a result of puncture, is to be prevented by antiseptic douching, and by making the applications not too frequently.

In one of my cases cellulitis was set up, but, as already mentioned, for this I was entirely to blame, having used the sound without sufficient care and gentleness.

Certain minor effects are frequently caused by the applications. These are—

1. *Headache*, which commonly lasts for two or three hours. It is relieved by 10 grain doses of antipyrin. Dr. Keith uses iodide of potassium.

2. *A feeling of bodily weariness and lassitude*, which soon passes off, giving place next day to a feeling of greater well-being than before, as a rule.

3. *A bloody discharge is often set up* by the introduction of the intra-uterine electrode. This soon stops, but may be followed for a day or two by a dirty-grayish, semi-bloody flux. And in bleeding fibroids, it may be that, for the first week or two of treatment, the flow is increased, so that one might give it up in despair, concluding that it had actually increased the hæmorrhage, whereas if the applications be continued a little longer it soon stops. This is of great importance, and should be borne in mind.

4. *Pain in the abdomen*, and especially over the fibroid, apparently due to a slight inflammation in the tumour, is not uncommon. It usually subsides in the course of twenty-four hours, and requires no treatment. A fresh application should not be made until it has entirely ceased.

5. It is generally supposed that a *sudden breaking of the current* is very disastrous. Twice, accidentally, it was broken at 200 mǎ., and once at 250 mǎ., but, beyond causing a slight shock, did no harm.

6. *Hæmorrhage may follow punctures*. This is easily

arrested by hot douches or packing. It is to be avoided by puncturing through the posterior fornix only, and by feeling first with the tip of the finger to make sure that no vessel pulsates at the spot selected.

Rationale.

While originally intending to steer clear of this subject, as it can only be a matter of speculation, I hope, nevertheless, to keep still within the sphere of observation and fact, by simply trying to interpret some of the results.

It is generally admitted that the effects of the constant current may be divided into two groups: first, that due to the passage of the current between the two poles, the inter-polar effect; and, second, that due to the localized action of the active internal pole, according as it is negative or positive. The difficulty commences when an attempt is made to explain these effects. Turn for a moment to each of the categories of cases, and see how the facts correspond with the statements made.

Firstly, *the Bleeding Fibroids*.—Here, unquestionably, I can confirm the statement that the positive metallic electrode in utero has the power of arresting hæmorrhage. It is clearly hæmostatic, as every one is agreed. But cases I. and X., in which hæmorrhage was greatly diminished by negative puncture, show that the inter-polar current may also be able to arrest hæmorrhage.

Secondly, *Relief of Pressure Symptoms*.—This apparently can be accounted for by the diminution in size of the tumour mass, which is a constant accompaniment. How this diminution occurs will be seen presently.

Thirdly, *the negative metallic pole* in utero does tend to increase the amount of blood lost at the periods, but this effect, in many cases, has been only temporary, I think, and at any rate has made little difference in the dysmenorrhœa.

Fourthly, *How does Diminution in Size of the Tumour occur?*—This is the question which has excited most discus-

sion and speculation, and is a point that can be satisfactorily determined only by experiment. Whether the electrical current can entirely dissipate a fibroid or not I am unable to say. I have never seen it happen, and Apostoli, with his vast experience, acknowledges its extreme rarity. But *diminution* in the size of the tumour *mass* is an undoubted fact. This is apparently an inter-polar effect entirely, but how it occurs I cannot pretend to say. Eleven of these sixteen cases underwent diminution, slight, no doubt, but still appreciable. In only one case was it so great that it could not be accounted for partly by the contraction and hardening of the tumour which follow the applications, and which, therefore, leave it harder and slightly smaller than before. As a result of this, also, any nodules near the external surface of the uterus tend to become subperitoneal by being gradually extruded, and those towards the interior become submucous, often pediculated, and may be expelled per vaginam. This, then, is the first factor in the diminution. The second one, which is purely theoretical, is therefore of correspondingly little value. As it is closely allied to the action which takes place in the process of absorption in *cellulitic cases*; let us look at them for a minute.

Lastly, *Cellulitis*.—The inter-polar current is here most probably the sole agent, and it acts, apparently, by stimulating and hastening (but in what way is doubtful) the process of absorption which occurs naturally. This effect is perhaps produced through the medium of the bloodvessels or nerves.

May not a similar process partly account for the diminution of fibroids? Here it is necessary to suppose that the new growth is surrounded by a zone of inflammatory tissue either in the stage of congestion or of exudation, either of which conditions the passage of an electric current will modify, so that a diminution in the bulk of that zone will result, and so the whole mass become smaller.

I am not seeking to deny the possibility of electrolysis occurring in the new growth tissue. It seems, however, very improbable, but direct experiment is the only way either to confirm or disprove it, and such experiment must, on account of its nature, be almost impossible.

What I do wish to point out is this—that the diminution in the size of the tumour in this series of cases is so slight comparatively, that it is not necessary to suppose that any destruction of tumour tissue has taken place. This may have happened ; it is impossible either to prove or disprove it. But if such an explanation as the one I have given is possible and likely, then it will be quite enough to account for all the decrease that has occurred,—except, perhaps, in one case, No. XVI., where the reduction in size was so great as to make this explanation not quite so satisfactory. But even here it is quite possible.

Further, the constant current acts as a *tonic*, so that patients feel much better and stronger, often before any change has occurred in the pelvic condition, either physically or symptomatically.

Then, too, it *relieves pain* just as happens in other parts of the body. But for this the constant is far inferior to the interrupted current. This is doubtless an action on the nerves.

The communication contains very little that is new or original, being mainly corroborative. It is an honest attempt to record in a fair, unbiassed manner a trial of the new agent which threatens to revolutionize gynæcological practice. If I have succeeded, even in the slightest degree, in adding to the reliable information on the subject, my object is fulfilled.

I have to thank Dr. Fordyce for kindly finishing some of the cases when I left Edinburgh, and must record the deep obligation I feel under to Professor Simpson, for whom the work was undertaken, and without whose kind and generous assistance it would have been impossible to accomplish.

NOTES.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—The following is the list of the officers for the year 1891 :—Dr. Braithwaite (Leeds) was elected President, in place of Dr. Wallace (Liverpool), whose term of office has expired. The following were elected Vice-Presidents :—Drs. Lloyd Roberts and Nesfield (Manchester), Drs. J. E. Burton and McFie (Leeds), and Dr. Keeling and Mr. Arthur Jackson (Sheffield). Dr. Sinclair (Manchester) was appointed Honorary General Secretary, and Dr. Walter (Manchester) Honorary Treasurer. The following gentlemen were appointed Local Secretaries :—Dr. Donald (Manchester), Dr. Briggs (Liverpool), Mr. Sidney Rumboll (Leeds), and Mr. Richard Favell (Sheffield).

OBSTETRICAL SOCIETY OF LONDON.—The following is the list of Officers for the year 1891 :—President, J. Watt Black, M.A., M.D. ; Vice-Presidents, Percy Boulton, M.D., Thomas Charles Stewart Corry, M.D. (Belfast), Thomas Crawford Hayes, M.A., M.D., Evan Jones (Aberdare), William Appleton Meredith, M.B., C.M., Alfred Joseph Tapson, M.B. ; Treasurers, G. Ernest Herman, M.B. (Chairman of the Board for the Examination of Midwives), Francis Henry Champneys, M.A., M.D. ; Honorary Secretaries, Albert Doran, Peter Horrocks, M.D. ; Honorary Librarian, William Duncan, M.D. Other Members of Council, Albert Charles Butter-Smythe, Frederick William Coates, M.D. (Salisbury), Charles James Cullingworth, M.D., W. Radford Dakin, M.D., S. Houston Dawson, M.D., Henry W. Freeman (Bath), John H. Galton, M.D., Henry Jervis, M.D., William Lenton Heath, M.B., Joseph Johnston, M.D., Henry Ambrose Lidiard, M.D. (Carlisle), Henry Colley March, M.D. (Rochdale), Thomas Carjell Nesham, M.D. (Newcastle-on-Tyne), G. R. Turner Phillips, Joseph Henry Philpot, M.D., John Baptiste Potter, M.D., Herbert R. Spencer, M.D., Harry Speakman Webb (Welwyn).

PROFESSOR S. TARNIER has been elected an Honorary Fellow of the Obstetrical Society of London to fill the vacancy caused by the death of Professor F. C. Faye, of Christiania.

ON Thursday, January 8th, 1891, Dr. Champneys was elected Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital; and Dr. Walter S. A. Griffith, Assistant Physician-Accoucheur.

OBSTETRICAL SOCIETY OF LONDON.—At the January meeting of this Society, held on Wednesday last, there was a large attendance of Fellows and Visitors to hear a paper by Dr. Playfair "On Removal of the Uterine Appendages in Cases of Functional Neurosis." The author opposed the operation in cases of purely functional neurosis, hystero-epilepsy, and hystero-mania, and was in favour of systematic therapeutical treatment even when marked structural disease of the tube and ovary existed, before more radical measures were adopted. A good discussion followed, in which Sir Spencer Wells, Dr. Priestley, Dr. Gervis, and other authorities took an active part. The general opinion was entirely against removal of the appendages for neurosis.

LIST OF OFFICERS AND COUNCIL OF THE BRITISH GYNÆCOLOGICAL SOCIETY.

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ROBERT BARNES, M.D., F.R.C.P., (London).

President.

W. CHAPMAN GRIGG, M.D. (London).

Vice-Presidents.

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A. AUVAR, M.D. (Paris)
ROBERT BELL, M.D. (Glasgow)
THOMAS A. CAMBRIDGE, M.R.C.S. (London)
THOS. M. DOLAN, M.D. (Halifax)
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W. DUNNETT SPANTON, F.R.C.S. (Hanley)
H. P. C. WILSON, M.D. (Baltimore)

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Editor of the Journal.

FANCOURT BARNES, M.D.

Honorary Secretaries.

W. HUGH FENTON, M.D. (London) | VINCENT DICKENSON, M.D. (London).

**LIST OF FELLOWS
OF THE BRITISH GYNÆCOLOGICAL SOCIETY.**

FOUNDED 1884.

INCORPORATED 1885.

List of Abbreviations.

H.P., Honorary President.
Pres., President.
V.P., Vice-President.
C., Council.
Libr., Librarian.

Treas., Treasurer.
Hon. Sec., Honorary Secretary.
Hon. Loc. Sec., Honorary Local Secretary.
F.F., Foundation Fellow.
L., Life Fellow.

Those marked with an asterisk () have not communicated their address.*

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|--------------------------|---|
| <p>Elected.
F.F.</p> | *ABBOTT, GEORGE, L.K.Q.C.P.I. |
| <p>L. 1888</p> | ADAM, GEORGE ROTHWELL, M.B., C.M., Carlton House, Hotham Street East, Melbourne, Victoria, Australia. |
| <p>F.F.</p> | ADAMS, JOSEPH, M.B., C.M. Edin., Northfield, Warrington. |
| <p>1886</p> | AICKEN, WILLIAM, M.D., 6, Murray's Terrace, Belfast. |
| <p>1888</p> | AIKEN, GEORGE HENRY, M.D., College of Physicians and Surgeons, New York, 702, Tenth Street, Oakland, California, U.S.A. |
| <p>1886</p> | AIKMAN, ALFRED, M.B., The Elms, Beverley Road, Hull. |
| <p>F.F.</p> | ALEXANDER, WILLIAM, M.D., F.R.C.S. Eng., 100, Bedford Street, Liverpool. C. 1887-9. V.P. 1890. |
| <p>F.F.</p> | ALLAN, JAMES, M.A., M.D., <i>Medical Superintendent Union Infirmary</i> , Leeds. |
| <p>1885</p> | ALLDEN, JOHN HORATIO, M.R.C.S.L., L.S.A., Shirley, Southampton. |
| <p>1886</p> | ALLOWAY, T. JOHNSON, M.D., <i>Instructor in Gynaecology McGill University, Montreal</i> , 934, Dorchester Street, W. Montreal, Canada. |
| <p>F.F.</p> | AMBROSE, ROBERT, B.A., L.R.C.P., 1, Mount Place, Whitechapel Road, E. |
| <p>1889</p> | APOSTOLI, Dr., 5, Rue Mollière, Paris. |
| <p>1885</p> | ARMSTRONG, WILLIAM, M.R.C.S. Eng., Hendham House, Harpurhey, Manchester. |
| <p>1888</p> | ARROL, CHARLES, M.D., C.M. Glas., L.R.C.S. Ed., 12, Edward Street, Bankstone, Sheerness. |
| <p>1889</p> | ASHTON, JAMES T., M.B., C.M., 11, Norland Square, Holland Park, W. |
| <p>1888</p> | AUVARD, A., M.D., <i>Accoucheur des Hopitaux</i> , 21, Rue de Lille, Paris. V.P. 1891. |
| <p>F.F.</p> | AVELING, JAMES H., M.D., <i>Consulting Physician to the Chelsea Hospital for Women</i> , 1, Upper Wimpole Street, W. V.P. 1884-8. Libr. 1886. |
| <p>F.F.</p> | AYLING, ARTHUR HENRY WILLIAMS, L.S.A. Lond., 94A, Great Portland Street, W. |

- Elected.
1889 BAGOT, WILLIAM S., M.B. Dub., L.R.C.S.I., Rotunda Hospital, Dublin.
- L. 1888 BAKER, CLARENCE ATWOOD, M.D., 312, Congress Street, Portland, Maine, U.S.A.
- 1885 BAKER, WILLIAM HENRY, M.D., *Assistant Professor of Gynaecology, Harvard University, Surgeon to the Free Hospital for Women, Boston*, 10, Beacon Street, Boston, Mass, U.S.A.
- 1889 BALDY, J. M., M.D., 328, South Seventeenth Street, Philadelphia, U.S.A.
- 1887 BALLERAY, G. H., M.D., Paterson, N.J.
- L. F.F. BANTOCK, G. GRANVILLE, M.D., F.R.C.S. Ed., *Surgeon to the Samaritan Free Hospital*, 12, Granville Place, Portman Square, w. V.P. 1884-6. Pres. 1887-8. Treas. 1888-90.
- F.F. BARBOUR, A. H. FREELAND, M.A., B.Sc., M.D., *Assistant to Professor of Midwifery Edinburgh*, 24, Melville Street, Edinburgh. C. 1884-8.
- F.F. BARBOUR, JAMES, M.D., 118, Newington Causeway, s.e.
- F.F. BARNES, ROBERT, M.D., F.R.C.P., *Consulting Obstetric Physician to St. George's Hospital, Consulting Physician to the Chelsea Hospital for Women and the Royal Maternity Charity*, 15, Harley Street, w. Hon. Pres. 1884.
- F.F. BARNES, R. S. FANCOURT, M.D., M.R.C.P., *Physician to the Chelsea Hospital for Women, the British Lying-in Hospital, and the Royal Maternity Charity*, 7, Queen Anne Street, w. Hon. Sec. 1884-86. V.P. 1887-9.
- F.F. BARRETT, ALFRED EDWARD, M.R.C.S. Eng., L.S.A. Lond., Addison Terrace, Uxbridge Road, w.
- F.F. BARRETT, HOWARD, M.R.C.S., 3, Tavistock Square, w.c. C. 1889.
- 1887 BARTER, WILLIAM, M.D.Mch., M.A.O., 70, Fellows Road, Belsize Park, N.W.
- L 1885 BATCHELOR FERDINAND CAMPION, M.D.Dur., M.R.C.S. Eng., L.S.A., L.R.C.P. Ed., *Lecturer on Midwifery and Gynaecology, University of Otago*, George Street, Dunedin, New Zealand.
- 1888 BATEMAN, A. G., M.B., C.M., 64, Longridge Road, South Kensington, s.w.
- 1885 BATEMAN, FREDERCK AUGUSTUS NEWTON, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., 4, Charles Street, St. James's Square, s.w.
- L. 1885 BATTEY, ROBERT, M.D., Rome, Georgia, U.S.A.
- L. F.F. BAYFIELD, HORACE OSBORNE, L.R.C.P. Edin., L.F.P.S. Glasg., 51, Merton Road, Wimbledon.
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- BEATON, ROBERT MILNE, M.B., C.M., 183, Kentish Town Road, n.w.
- 1887 BECKETT, JOHN, M.D., M.K.Q.C.P. Lond.
- F.F. BELL, ROBERT, M.D., F.F.P.S. Glasg., *Physician to the Glasgow Institute for Diseases of Women and Children*, 29, Lynedoch Street, Glasgow. C. 1885-8. V.P. 1891.
- F.F. BENINGTON, ROBERT CREWDSON, L.R.C.P. Lond., M.R.C.S., L.S.A., *Demonstrator of Anatomy and Medical Tutor to the University of Durham College of Medicine*, 5, Victoria Square, Newcastle. C. 1887-8.
- F.F. BENNETT, CHARLES HENRY, M.D., M.R.C.S., L.S.A., College House, Hammersmith, w.
- F.F. BERTOLACCI, JOHN HEWETSON, L.S.A., care of F. R. Bertolacci, Esq., 35, Park Road, New Wandsworth, s.w.

Elected.

- L. 1885 BIGELOW, HORATIO RIPLEY, M.D., Post Office Box 5104, Boston, Mass., U.S.A.
- 1886 BIGGS, MOSES G., M.R.C.S., 101, Northcote Road, Wandsworth Common.
- F.F. BIRD, GEORGE GWYNNE, M.R.C.S. Eng., 22, St. Mary's Terrace, Paddington, w.
- 1887 BLACK, JOHN GORDON, M.D. Lond., 7, Cambridge Crescent, Harrogate.
- L. F.F. BLAKE, EDWARD, M.D.
- 1890 BOLDT, H. J., M.D., 245, West 42nd Street, New York, U.S.A.
- 1886 BOREL, FREDERICK, M.D. Wurzburg, 96, Talbot Road, Westbourne Park, w.
- 1887 BOURNS, N. WHITELAW, M.D. Brus., M.R.C.S.E., L.R.C.P. Ed., 449, Fulham Road, West Brompton, s.w.
- 1887 BOWEN, WILLIAM A., M.R.C.S., Punjab Laboratory, Lahore, Punjab, India.
- 1887 BOWIE, ALEX., M.D., C.M., 26, Harley Street, w.
- 1887 BOYD, J. ST. CLAIR, M.D., 19, Victoria Place, Belfast.
- L. 1885 BOYD, JAMES P., M.D., *Professor of Obstetrics and Gynecology, Albany Medical College, Albany, New York, U.S.A.*
- 1886 BRAMWELL, JOHN MILNE, M.B., C.M., Burlington Crescent, Goole, Yorkshire.
- F.F. BROWN, C. H. GAGE, M.B., C.M. Edin., 74, Cadogan Place, s.w.
- 1889 BROWNLEE, MILNE, M.D., Woodstock, Ontario, Canada.
- L. 1885 BUDIN, PIERRE, M.D., *Professeur agrégé à la Faculté de Médecine de Paris, Accoucheur de la Charité, 129, Boulevard St. Germain, Hyde, Paris.*
- 1887 BULLEID, EDGAR G., L.R.C.P., L.C.C.S., 32, Cambridge Street, Hyde Park, w.
- 1887 BURFORD, GEORGE HENRY, M.B., C.M. Aber., 20, Queen Anne Street, w.
- F.F. BURTON, J. E., *Surgeon to the Liverpool Hospital for Women, 64, Rodney Street, Liverpool.* C. 1884-8. Hon. Loc. Sec.
- 1887 BURY, EDWARD CHARLES, M.R.C.S., L.S.A., M.D., 5, York Row, Wisbech.
- L. F.F. BUXTON, DUDLEY WILMOT, M.D., B.S., M.R.C.P. Lond., *Anæsthetist to University College Hospital and to the Hospital for Women, Soho Square, 82, Mortimer Street, Cavendish Square, w.*
- 1885 BYERS, JOHN WILLIAM, M.A., M.D., M.Ch. (Q.U.I.), M.R.C.S.E., L.M.K. and Q.C.P.I., *Physician for Diseases of Women to the Royal Hospital, Belfast, and Physician to the Belfast Hospital for Sick Children, Lower Crescent, Belfast.*
- L. 1885 BYFORD, WILLIAM HEATH, M.D., Chicago, U.S.A.
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- 1887 CALDWELL, W. SPENCER, M.D., Freeport, Ills., U.S.A.
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- F.F. CAMBRIDGE, THOMAS ARTHUR, M.R.C.S. Eng., L.S.A., 124, Stroud Green Road, Finsbury Park, N. C. 1887-9. V.P. 1890.
- F.F. CAMERON, JAMES, M.D. Aberd., Fenella, Hendon, N.W.

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 1887 CAMERON, J. C., M.D., *Professor of Midwifery, McGill University*, 941, Dorchester Street, Montreal.
 F.F. CAMPBELL, WILLIAM FREDERICK, L.R.C.P. Edin., L.F.P.S.G., L.S.A. Lond., 88, Junction Road, Upper Holloway, N.
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 L. 1886 CARSTENS, J. HENRY, M.D., Detroit, Michigan, U.S.A.
 F.F. CARTER, GEORGE ROE, L.R.C.P.I., L.R.C.S.A., Grasmere Lodge, 3, Anerley Road, S.E.
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 F.F. CASE, WILLIAM, M.R.C.S., L.S.A., 26, Westbourne Road, Arundel Square, N.
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 L. F.F. CHILD, EDWIN, M.R.C.S.E., Vernham, New Malden, Surrey.
 1886 *CLABBURN, TOM GEORGE, M.R.C.S. Eng.
 F.F. CLARK, JAMES FENN, M.R.C.S., L.S.A., Clent House, Beauchamp Square, Leamington.
 1887 CLARKE, ARTHUR, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., Street, Somerset.
 F.F. CLARKE, FINCASTLE GEORGE BARLOW, M.D., C.M., Oak Bank, Lam-berhurst, Hawkhurst, Kent, and 5, Austin Friars, E.C.
 L. 1887 CLARKE, THOMAS KILNER, F.R.C.S. Eng., M.D., M.A., M.B. Cantab., 66, John William Street, Huddersfield.
 1886 CLEGHORN, GEORGE, M.D. Dur., Blenheim, New Zealand.
 L. F.F. CLENDINNEN, FREDERICK JOHN, M.D., Melbourne, Australia. Hon. Loc. Sec.
 1889 CLOSS, JOSEPH OSBORN, M.B. Ed., Invercargill, New Zealand.
 F.F. COCK, WILLIAMS, M.R.C.S., L.R.C.P. Edin., 108, Queen's Road, Peckham, S.E.
 F.F. COFFIN, R. MAITLAND, F.R.C.P. Edin.
 F.F. COFFIN, THOMAS WALKER, F.R.C.S. Edin., 22, Upper Park Road, Haverstock Hill, N.W.
 F.F. COGHILL, JOHN GEORGE SINCLAIR, M.D., F.R.C.P. Edin., *Physician Royal National Hospital for Consumption, Ventnor*, St. Catherine House, Ventnor, Isle of Wight. C. 1884-7. V.P. 1888.
 L. F.F. COLE, RICHARD BEVERLEY, M.D., A.M., M.R.C.S. Eng., Ph.D., San Francisco, California, U.S.A.
 F.F. COLEMAN, CHARLES ALFRED, M.D. Edin., Hill View, Streatham Common, S.W.
 1890 COLLINS, E. TENISON, L.S.A., Campden House, Selly Park, Birmingham.
 1885 CONDON, JAMES HUNT, M.D. St. Andrews, M.R.C.S., L.S.A., L.M. Dublin, *Surgeon-Major Indian Army Medical Department*, Cawnpore, India.
 L. 1887 COOK, S. L., M.D., Washington, U.S.A.

Elected.

- L. F.F. CORDES, AUGUSTE E., M.D. (Paris), M.R.C.P. Lond., *Privat-Dozent of Midwifery at the Maternity Hospital, Consulting Physician the Misericordia Lying-in Hospital*, 12, Rue Bellot, Geneva.
- F.F. CRAIGIE, JOHN HAMILTON, F.R.C.S. Edin., *Surgeon-Dentist to the Chelsea Hospital for Women*, 13, Saville Row, w.
- F.F. CRANNY, JOHN JOSEPH, M.D. Dub., A.B., F.R.C.S.I., *Surgeon to the Jervis Street Hospital, Examiner in Midwifery Royal College of Surgeons, Ireland*, 17, Merrion Square North, Dublin.
- F.F. CREASER, J. ROBERTSON, F.R.C.S. Edin., 2, Ogle Terrace, South Shields.
- 1886 CRESSWELL, PEARSON ROBERT, F.R.C.S. Ed., Dowlais, Merthyr Tydfil.
- 1888 CRICHTON, GEORGE, M.B., L.R.C.S. Ed., 3, Cambridge Villas, Twickenham.
- F.F. CRIPPS, C. COUPER, M.D., M.R.C.S., 187, Camberwell Grove, Denmark Hill, s.e.
- 1888 CRISP, ERNEST HENRY, L.R.C.P., M.R.C.S., The Lawns, Balham Hill, Clapham Common, s.w.
- F.F. CROOM, JOHN HALLIDAY, M.D., *Physician to the Royal Maternity Hospital, Edinburgh, President of the Obstetrical Society of Edinburgh*, 25, Charlotte Square, Edinburgh. C.1884-6. V.P. 1887-9.
- L. 1887 CROUZAT, E., M.D., 130, Boulevard St. Germain, Paris.
- 1886 CUSHING, CLINTON, M.D., 636, Sutter Street, San Francisco, U.S.A.
- 1888 CUTHBERT, WILLIAM WOOD, M.R.C.S. Eng., L.S.A. Lond., Mendlesham, Stonham, Suffolk.
- 1885 DANIEL, WOODRUFFE, M.R.C.S. Eng., L.S.A. Lond., Wareham, Dorset.
- 1885 DARWIN, GEORGE HENRY, F.R.C.P. Edin., The Cedars, Albert Park, Didsbury, Manchester.
- F.F. DAVIES, ELLIS THOMAS, M.D., *Assistant Medical Officer, Hospital for Women*, 61, Shaw Street, Liverpool.
- 1885 DEMPSEY, ALEXANDER, M.D.Q.U.I., L.R.C.S.I., *Physician and Gynaecologist to Extern Department Mater Infirmorum Hospital*, Clifton Street, Belfast.
- F.F. DESSAIGNES, A. RIBEMONT, M.D., *Professor agrégé à la Faculté de Médecine de Paris, Accoucheur de l'Hôpital Beaujon*, 10, Boulevard Malesherbes, Paris.
- 1886 DEWAR, JOHN, L.R.C.P. Ed., L.R.C.S. Ed., 132, Sloane Street, s.w.
- L. 1887 DEWES, FREDERICK JOSEPH, L.R.C.P. Lond., M.R.C.S.E., care of Messrs. Binney & Co., Madras, India.
- 1888 DICKEY, SAMUEL, M.D., *Physician to Belfast Lying-in Hospital*, 9, Clifton Street, Belfast.
- F.F. DICKINSON, T. VINCENT, M.D., *Physician to the Out-Patients, Chelsea Hospital for Women*, 33, Sloane Street, s.w. Hon. Sec. 1891.
- 1886 DICKSON, CHARLES COCHRANE, L.R.C.P. & S. Ed., Bowmont House, Willesden Lane, N.W.
- L. F.F. DINGLE, WILLIAM ALFRED, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., *Surgeon Royal Maternity Charity*, 46, Finsbury Square, E.C. 1889.
- 1887 DINGLEY, WILLIAM, M.R.C.S., L.S.A., 277, Camden Road, N.
- L. 1888 DIRNER, GUSTAV A., M.D., 4, Hatvani U., Buda-Pesth, Hungary.

Elected.

- F.F. DIXON, JOHN, M.B., C.M. Edin., Portland House, 39, Gloucester Road, Finsbury Park, N.
- F.F. DIXON, WILLIAM EDWARD, M.R.C.S., L.S.A., Bridge Cottage, Oulton Broad, Lowestoft.
- 1885 D'MONTE, DOMINIC A., M.D. Brussels, L.R.C.P. Lond., L.M. Ed., Bandora, Bombay. Hon. Loc. Sec.
- F.F. DOLAN, THOMAS M., M.D., F.R.C.S. Edin., Horton House, Halifax, Yorkshire. C. 1886-8. V.P. 1888.
- L. 1889 DOUGLAS, RICHARD, M.D., Nashville, Tennessee, U.S.A.
- F.F. DRAKE-BROCKMAN, EDWARD FORSTER, F.R.C.S. Eng., L.R.C.P. Lond., care of Messrs. H. K. Lewis, 136, Gower Street, London, W.C.
- F.F. DRAPER, JAMES WILLIAM, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., Almondsbury, near Huddersfield.
- L. 1885 DUDLEY, EMILIUS CLARK, A.B., M.D., *Professor of Gynecology Chicago Medical College*, 1619, Indiana Avenue, Chicago, U.S.A.
- 1887 DUKE, BENJAMIN, M.R.C.S. Eng., L.S.A. Lond., Windmill House, Clapham Common, S.W.
- 1889 DUKE, EDGAR, M.R.C.S. Eng. & L.S.A., 59, Pevensey Road, St. Leonards-on-Sea.
- F.F. DUNDAS, MORDAUNT GEORGE, M.R.C.S., L.S.A., Litcham, Norfolk.
- 1890 ECCLES, F. R., M.D., Ellwood Place, London, Ontario, Canada.
- L. F.F. EDIS, ARTHUR WELLESLEY, M.D., F.R.C.P., *Obstetric Physician to the Middlesex Hospital, Physician to the Chelsea Hospital for Women*, 22, Wimpole Street, W. Treas. 1884-7. Pres. 1888. C. 1889.
- L.F. EDWARDS, THOMAS E., L.R.C.P. Lond., M.R.C.S.E., 98, Gloucester Crescent, Hyde Park, W.
- F.F. ELDER, GEORGE, M.D., 17, Regent Street, Nottingham. C. 1889.
- F.F. ELLIOT, HENRY FRANCIS, M.R.C.P. Edin., F.R.C.S. Edin., Brook House, Snarebrook, E.
- L. 1885 ENGELMANN, GEORGE J., M.D., 3003, Locust Street, St. Louis, U.S.A.
- F.F. ENSOR, EDWIN THOMAS, M.D., 23, Chesterton Road, North Kensington, W.
- 1885 ERSKINE, WILLIAM, M.D. St. And., Tullyallan, Peak Hill, Sydenham.
- 1885 EVANS, EBENEZER RICHARD, L.R.C.P., L.R.C.S. Edin., Llandyssul, South Wales.
- F.F. EVE, RICHARD WAFFORD, M.B., 101, Lewisham High Road, New Cross, S.E.
- 1885 FEARNLEY, WILLIAM, L.R.C.S. Ed. (1875), 81, Elgin Avenue, Paddington, W.
- 1886 FENGER, CHRISTIAN, M.D., Chicago, Illinois, U.S.A.
- F.F. FENTON, W. HUGH, M.D., *Physician to the Out-Patients, Chelsea Hospital for Women*, 27, George Street, Hanover Square, W. Hon. Sec. 1890.
- F.F. FENWICK, BEDFORD, M.D., M.R.C.P., *Assistant Physician to the Hospital for Women, and to the City of London Hospital for Diseases of the Chest*, 20, Upper Wimpole Street, W. Libr. 1887. Hon. Sec. 1888-9. V.P. 1890.

- Elected.
 L. F.F. FITZGERALD, CHARLES EGERTON, M.D., West Terrace, Folkestone.
 C. 1888-9.
- F.F. FLEMING, ROBERT GAGE, M.D., Q.U.I., L.R.C.S. Edin., L.M.,
 1, Wilton Terrace, High Street, New Thornton Heath, Croydon.
- F.F. FORDHAM, JOHN W., L.R.C.P. Edin., 78, Mile End Road, E.
- 1885 FRASER, GRAEME BISDEE, M.R.C.S., L.S.A., Belvidere, Weston-super-
 Mare.
- F.F. FULLER, CHARLES CHINNER, F.R.C.S. Eng., 10, St. Andrew's Place,
 Regent's Park, N.W.
- 1885 FULLER, LEEDHAM, M.R.C.S. Eng., L.S.A. Lond., Streatham Hill, S.W.
- 1889 GALLOWAY, A. RUDOLPH, M.D., 207, Union Street, Aberdeen.
- F.F. GARDINER, BRUCE HUBERT JOHN, L.R.C.P. Edin., M.R.C.S., Glou-
 cester House, Barry Road, East Dulwich, S.E.
- F.F. GARDNER, WILLIAM, M.D., *Professor of Gynaecology in McGill Univer-*
sity, 109, Union Avenue, Montreal, Canada. V.P. 1887.
- L. 1885 GILES, PETER, M.R.C.S., L.R.C.P., The Quinta, Brobury, Hereford.
- F.F. GIMSON, THOMAS STEVENS, M.R.C.S., 32, Fitzroy Square, W.
- 1886 GLOSTER, JAMES, M.B., C.M., 15, Upper Phillimore Place, W.
- F.F. GOLDSMITH, GEORGE POCKOCK, M.D., 3, Harpur Place, Bedford.
 C. 1891.
- L. 1886 *GORDON, S. C., M.D.
- 1890 GRAY, CLEMENT FREDERICK, M.R.C.S., L.S.A., Newmarket, Cambs.
- 1889 GREENE, L. M., M.D. Ohio.
- F.F. GREET, CHARLES HARVEY, L.S.A., 1A, Penton Place, King's Cross
 Road, W.C.
- F.F. GRIFFITH, G. DE GORREQUER, L.R.C.P., M.R.C.S., late *Senior Phy-*
sician to Hospital for Women and Children, Pimlico, 34, St. George's
 Square, S.W., and *New Indian Club*, Whitehall Gardens, S.W.
- F.F. GRIGG, W. CHAPMAN, M.D., M.R.C.P., *Assistant Obstetric Physician*
to the Westminster Hospital, Physician to Queen Charlotte's Hospital,
 27, Curzon Street, Mayfair, W.
 C. 1884-6. Hon. Sec. 1886-7. V.P. 1888. Pres. 1891.
- L. 1885 GRIMSDALE, THOMAS BABINGTON, M.B., M.R.C.S., *Assistant Surgeon*
Hospital for Women, Liverpool, 29, Rodney Street, Liverpool.
- F.F. GROTH, ERNEST RUDOLPH GOTTHARD, M.D. (Berlin), L.R.C.P. Lond.,
 5, Weymouth Street, Portland Place, W.
- F.F. GROVES, HENRY EDWARD, M.R.C.S., 3, Campsbourne Road, Hornsey, N.
- 1889 GUBB, ALFRED S., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., 29,
 Gower Street, Bedford Square, W.C.
- 1886 HACKMAN, LEONARD KING HAVELOCK, L.R.C.P. Ed., L.M., L.R.C.S.
 Ed., Ritson House, Kingston Road, Portsmouth.
- 1885 HACKNEY, JOHN, M.D., M.R.C.S., L.S.A., Hythe, Kent.
- F.F. HALL, ALFRED R., M.D., L.R.C.P., M.R.C.S., Sunnybank, Shoot-up
 Hill, Brondesbury, N.W.
- 1885 HALL, RUFUS B., M.D., 281, West Seventh Street, Cincinnati, U.S.A.
- 1888 HAMILTON, J. BEAMISH, L.R.C.P., Tudor House, Tenby.
- L. 1886 HANKS, H. T., M.D., 55, East 59th Street, New York, U.S.A.

Elected.

- F.F. HARKNESS, ALEXANDER, L.R.C.P. Edin., 4, Oak Villas, St. Anne's Road, Stamford Hill, N.
- F.F. HARPER, JAMES, M.D. Lond., 7, Drayton Terrace, South Kensington, S.W.
- F.F. HARRIES, THOMAS DAVIES, L.R.C.P. Lond., F.R.C.S. Eng., L.S.A., Grosvenor House, Aberyswith.
- F.F. HARRIS, WILLIAM HENRY, M.D., 78, Oxford Gardens, North Kensington, W.
- 1885 *HARRISON, THOMAS, A.M., M.D., Ch.M. Univ. Dublin.
- F.F. *HARTNETT, JOHN J., M.D., M.Ch., L.M. Royal Univ., L.A.H. Dub.
- F.F. *HARWOOD, SWEITZER SOUTTER, M.D., L.K.Q.C.P.I.
- 1888 HASARD, JOHN, M.R.C.S., L.S.A. Lond., 5, Norfolk Street, Strand, London.
- F.F. HASLAM, WM. DOIGE, M.R.C.S. Eng., L.S.A., 19, Mecklenburgh Square, W.C.
- 1885 HAULTAIN, FRANCIS NICOL, M.D., F.R.C.P. Ed., *Physician for Diseases of Women Royal Dispensary, Edinburgh*, 17, Rutland Street, Edinburgh.
- 1889 HAWKES, A. E., M.D., L.R.C.P. Edin., L.R.C.S. Edin. and L.M., 22, Abercromby Square, Liverpool.
- F.F. HAWKINS, ALEXANDER FREDERICK, L.R.C.P. Lond., F.R.C.S. Edin., *Surgeon to the Lying-in Charity, Birmingham*, Ivy Walls, Islington Row, Edgbaston, Birmingham.
- L. 1886 HEADLEY, W. BALLS, M.A., M.D., M.R.C.P., 17, Collins Street East, Melbourne.
- 1887 HEALD, BENJAMIN GRAY, L.R.C.P. Ed., L.F.P.S.G., Red House, East Street, Leeds.
- F.F. HEBERT, PAUL ZOTIQUE, M.D., C.M., L.R.C.P. Lond., 54, Berners Street, Oxford Street, W.
- L. 1885 HEIBERG, WILHELM, M.D., Frederikshospital, Copenhagen.
- 1889 HELLIER, JOHN B., M.D. Lond., Headingley, near Leeds.
- 1885 HENSMAN, FRANK HENRY, M.R.C.S. Eng., *Surgeon-Major, Army Medical Staff*, Windsor Barracks.
- L. 1887 HETHERINGTON, GEO. ALBERT, M.D., St. John, N.B., Canada.
- F.F. *HEWITT, JOHN, M.R.C.P. Edin.
- F.F. HICKS, GEORGE BORLASE, M.R.C.S., L.M. Eng., L.R.C.S. Edin., 149, Amherst Road, Hackney, E.
- 1885 HILL, J. WOOD, L.R.C.P., M.R.C.S., Clovelly, Westgate-on-Sea.
- F.F. HILLS, AUGUSTUS PHILLIPS, M.R.C.S. Eng., Carlton House, Prince of Wales Road, Battersea Park, S.W. C. 1888-9.
- F.F. HINE, ALFRED LEONARD, L.R.C.P. Lond., M.R.C.S., L.S.A., Eppingdale, Leytonstone Road, E. C. 1891.
- 1887 HITCHINS, THOMAS J., M.D., M.R.C.S., L.R.C.P., &c., Broadfield, Crawley, Sussex.
- 1886 *HOAG, JUNIUS C., M.D.
- F.F. HOCKEN, CHARLES EDWARD, M.D., Cleveland House, Palmerston Road, Wood Green, N.
- F.F. HODGSON, ROBERT HUGH, L.R.C.P. Edin., M.R.C.S. Eng., 204, Rye Lane, Peckham, S.E.
- F.F. HODSON, HENRY ALGERNON, M.R.C.S. Eng., L.R.C.P. Edin., 23, Brunswick Square, Brighton.
- F.F. HOLLAND, EDMUND, M.D., M.R.C.P., *Physician to the Hospital for Women*, 1, Titchfield Terrace, North Gate, Regent's Park, N.W.

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- Elected
1890 HOLMES, Dr. H. R., Portland, Oregon, U.S.A.
- L. 1885 HOOPER, JOHN WILLIAM DUNBAR, L.R.C.P. Edin., L.R.C.S. Edin.,
Surgeon to the Women's Hospital, Melbourne, 54, Collins Street
East, Melbourne.
- L. 1889 HOPKINS, James B., M.D., Parkerville, Kansas, U.S.A.
- 1885 HOUGH, JAMES HAYWARD, M.A., M.R.C.S., Fern House, Trumping-
ton Street, Cambridge.
- F.F. HOWELL, HORACE SYDNEY, M.D., F.R.C.S., 18, Boundary Road, St.
John's Wood, N.W.
- 1887 HUMISTON, WILLIAM H., M.D. Cleveland, Ohio, U.S.A.
- 1887 HUTCHISON, GEORGE WRIGHT, M.D. Aber., M.R.C.P. Edin., Chip-
ping Norton, Oxon.
- 1885 IMLACH, FRANCIS, M.D. Edin., M.R.C.S. Eng., *Honorary Medical
Officer, Hospital for Women, Liverpool*, 16, Canning Street, Liver-
pool. C. 1887-9.
- 1887 INGLEBY-MACKENZIE, JOHN, M.B. Cantab., M.R.C.S., L.S.A., 47B,
Welbeck Street, W.
- F.F. ISDELL, FITZGERALD, A.B., M.B. Dub., 43, Great St. Andrew Street,
W.C.
- 1885 JACKSON, A. REEVES, M.D., care of Dr. J. H. Stowell, 526, Wabash
Avenue, Chicago, Illinois, U.S.A.
- 1886 JACKSON, JAMES, M.R.C.S., L.S.A., 15, Huntingdon Street, Barns-
bury, N.
- F.F. JACKSON, THOMAS VINCENT, F.R.C.S. Edin., *Senior Surgeon to the
Wolverhampton and Staffordshire General Hospital*, Whetstone
House, Wolverhampton. C. 1884-7.
- 1886 JAGGARD, WILLIAM WRIGHT, M.D., 2330, Indiana Avenue, Chicago,
Ill., U.S.A.
- F.F. JAMES, W. CULVER, M.D., 11, Marloes Road, Kensington, S.W.
C. 1884-7.
- 1887 JAMIESON, ARCHIBALD, M.D., C.M. Queen's University, Kingston,
Ontario, L.S.A. Lond., Kars, Ontario, Canada.
- 1885 JAMIESON, ROBERT ALEXANDER, M.D. Q.U.I., Shanghai, China.
- F.F. JAY, HENRY MASON, M.D. Aberd., Chippenham, Wilts.
- 1887 JESSETT, FREDERIC BOWREMAN, F.R.C.S. Eng., *Surgeon to the Cancer
Hospital, Brompton*, 16, Upper Wimpole Street, W. C. 1891.
- L. 1885 JEWETT, CHARLES, M.D., 307, Gates Avenue, Brooklyn, U.S.A.
- F.F. JOHNSON, JAMES BOVELL, M.D., M.Ch., Montreal, L.S.A. Lond.,
Mickleton, Campden, Gloucestershire.
- 1886 JOHNSON, JOSEPH TABER, M.D., *Professor of Obstetrics*, 926, Farragut
Street, N.W., Washington, U.S.A.
- 1886 JOHNSTON, JOHN, M.R.C.S. Eng., 2, Rocky Hill Terrace, Maidstone.
- 1885 JOHNSTON, WILLIAM BEECH, M.D., 157, Jamaica Road, S.E.
- L. 1886 JOHNSTONE, ARTHUR W., M.D. Danville, Kentucky, U.S.A.
- 1887 JONES, C. N. DIXON, M.D., 163, Kalb Avenue, Brooklyn, New York.
- 1888 JONES, DAVID OGDEN, M.D. Mich., L.R.C.P. Lond., Toronto, Canada.
- F.F. JONES, H. MACNAUGHTON, M.D., *Examiner in Midwifery, Royal
University, Ireland*, 141, Harley Street, W. C. 1890.

- Elected.
 1887 JONES, JAMES THORESBY, M.R.C.S., L.R.C.P.E., L.M., 103, Sutherland Avenue, w.
 F.F. JONES, LEWIS, M.D., M.R.C.S., Oakmead, Balham, s.w.
 1885 JOUBERT, CHARLES HENRY, M.B. Lond., F.R.C.S. Eng., *Acting Professor of Midwifery, Calcutta*, 6, Harrington Street, Calcutta.
- 1885 *KEENAN, ALFRED J. W., M.D., L.R.C.S., L.R.C.P. Edin., L.M.
 1886 KELLETT, ROBERT GUY, L.K.Q.C.P.I., The Pitchards, Halstead, Essex.
 L. 1889 KELLOGG, J. H., M.D., Battle Creek, Michigan, U.S.A.
 F.F. KEMPSTER, HENRY, M.B., M.C.R.S., Hastings House, Lavender Hill, Clapham Junction, s.w.
 F.F. KENNEDY, HUGH B., L.R.C.S.I., *Assistant Surgeon to the Mater Misericordia Hospital*, 89, Denmark Street, Dublin.
 F.F. KENNEDY, JOHN BLYDESTYN, M.R.C.S. Eng., L.S.A., Stratford Hall, Stratford, E.
 1885 KENNEDY, SAMUEL, F.R.C.S., L.R.C.P. Edin., 22, George Street, Hanover Square, w.
 F.F. KIALLMARK, HENRY WALTER, M.R.C.S., 5, Pembridge Gardens, Bayswater, w.
 L. 1886 KING, ALBERT F. A., M.D., 726, 13th Street, Washington, U.S.A.
 F.F. KNOTT, CHARLES, M.R.C.P. Edin., Liz Ville, Elm Grove, Southsea.
 L. 1886 KNOX, J. SUYDAM, M.D., 14, Loomis Street, Chicago, Illinois, U.S.A.
- F.F. LAMPREY, RICHARD ORFORD, L.R.C.P. and L.R.C.S. Edin., 62, East Hill, Wandsworth, s.w.
 1890 LANGLEY, AARON, L.R.C.P. Edin. and L.M., L.R.C.S. Edin., 149, Walworth Road, s.e.
 1890 LANKFORD, Dr. LIVIUS, Norfolk, Virginia, U.S.A.
 F.F. *LARKIN, FRANK COLET, M.B., C.M. Edin.
 L. 1886 LAWRIE, JAS. MACPHERSON, M.D., *Physician to the Weymouth Sanatorium*, Greenhill, Weymouth.
 L. F.F. LEBLOND, ALBERT, M.D., *Médecin de Saint-Lazare*, 54, Rue d'Hauteville, Paris.
 F.F. LEICESTER, AMBROSE WILLIAM MONTAGUE, M.B., C.M. Edin., 58, Catherine Street, Liverpool.
 1889 LEIGH, W. W., L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., Glyn Bargoed, Treharris, R.S.O., South Wales.
 L. F.F. LE PAGE, JOHN FISHER, M.D., L.R.C.P. Edin., 17, The Crescent, Salford, Manchester.
 1888 LESLIE, ROLPH, M.D., M.R.C.P. Lond., 48, Lupus Street, s.w.
 F.F. LESLIE, WILLIAM MURRAY, M.B., C.M. Edin., 41, Gengall Road, Millwall, E.
 F.F. LEWIS, HENRY, M.D., West Terrace, Folkestone.
 F.F. LIGERTWOOD, THOMAS, M.D., Royal Hospital, Chelsea, s.w.
 1889 LIGHT, E. MELLOR, M.A., M.B.
 F.F. LLEWELLYN, REES RALPH, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., 152, Whitechapel Road, E.
 F.F. LLOYD, SAMUEL, M.D., 4, High Street, Bloomsbury, w.c.

- Elected.
1885 LONG, FREDERICK WILLIAM DEVEREUX, L.S.A., 31, Finsbury Square, E.C.
- F.F. LOW, RICHARD MARSDEN PILKINGTON, M.B., L.M. Edin., L.R.C.P. Edin., L.R.C.S. Edin., L.M., 2, Nevern Road, Nevern Square, s.w.
- F.F. *LUNDY, LOUIS FRANCIS, M.R.C.S. Eng., L.S.A. Lond., L.M.
- L. 1885 LUSK, WILLIAM T., M.D., 47, East Thirty-fourth Street, New York, U.S.A. V.P. 1887.
- F.F. LYCETT, JOHN ALLAN, M.D., M.R.C.P. Edin., The Hollies, Graiseley, Wolverhampton. Hon. Loc. Sec. C. 1889.
- F.F. MACAN, ARTHUR VERNON, B.A., M.B. Dub., M.Ch., M.A.O., *Ex. Master of the Rotunda Hospital, Dublin*, 53, Merrion Square, Dublin. V.P. 1887. Pres. 1889. C. 1890.
- L. 1885 MACAN, JAMESON JOHN, M.A., M.R.C.S., 62, George Street, Portman Square, w.
- F.F. MACCALLUM, DUNCAN C., M.D., 45, Union Avenue, Montreal, Canada.
- 1885 *MACDONNELL, MARK ANTONY, M.D., M.Ch., L.M. (Q.U.I.)
- F.F. MACGAVIN, JOHN, L.R.C.P., L.R.C.S.E., 72, Trafalgar Road, Greenwich, S.E.
- 1885 MCGEAGH, WILLIAM, M.D. Roy. Univ. Ireland, M.R.C.S. Eng., 20, Spellow Lane, Liverpool.
- L. 1889 MACKAY, W. A., M.D., Huelva, Spain.
- 1886 MACKENZIE, WILLIAM G., F.R.C.S. Ed., 92, Richmond Terrace, Belfast.
- 1885 MACKIE, JOHN, L.R.C.P., L.F.P.S. (Edin. and Glasgow), 101, London Road, Leicester.
- L. 1888 MACKINTOSH, G. D., M.D. Aberd., Archer's Lodge, Harpurhey, Manchester.
- L. 1888 MACPHATTER, N. LINCOLN, M.D., Guelph, Canada.
- 1886 MACPHERSON, CHARLES, M.B. Glas., Bonar Bridge, Sutherlandshire, N.B.
- 1887 MANSER, FREDERICK, M.R.C.S. Eng., The Priory, Church Road, Tunbridge Wells.
- 1888 MANTON, WALTER PORTER, M.D., 43, Watson Street, Detroit, Mich., U.S.A.
- 1887 MARLEY, HENRY FREDERICK, M.R.C.S.E., L.R.C.P., L.S.A., L.M., The Nook, Padstow, Cornwall.
- F.F. MARSH, THOMAS CHARLES, M.R.C.S. Eng., L.R.C.P. Edin., 56, Fitzroy Street, Fitzroy Square, w.
- F.F. MASSON, GEORGE BLAKE, L.R.C.S., L.R.C.P., L.M., Shaftesbury Villa, Vale Square, Ramsgate.
- 1889 MAUNSELL, HENRY WIDENHAM, M.B. Dub., Dunedin, New Zealand.
- 1886 MAURY, R. B., M.D., Memphis, Tennessee, U.S.A.
- 1887 MCCRIMMON, M., M.D., M.R.C.S. Eng., Palermo, Ontario.
- 1887 McMORDIE, W. K. M., M.D., 17, College Square East, Belfast.
- 1887 McMULLEN, WILLIAM, L.K.Q.C.P.I., L.R.C.S.I., L.M. Dublin, 319A, Brixton Road, s.w.
- 1887 MENDES DE LEON, M.A., M.D., Kloveniersburgwal 94, Amsterdam.
- L. 1886 MERRIMAN, HENRY P., M.D., 2239, Michigan Avenue, Chicago, U.S.A.
- 1889 MERRITT, Dr., St. Catherine's, Ontario, Canada.

- Elected.
 F.F. MILLER, ANDREW, M.D. Edin., 5, Grosvenor Street, w.
 L. 1886 MILLER, DE LASKIE, M.D., *Professor of Obstetrics, Rush Medical College, 2,011, Prairie Avenue, Chicago, U.S.A.*
 1888 MOIR, JOHN, M.D., Hack Road, Victoria Docks, Canning Town, E.
 F.F. MOORE, STEPHEN HENRY, F.R.C.S.E., *Medical Superintendent of Chelsea Infirmary, Cale Street, s.w.* C. 1891.
 1889 MOOTOOSAWMY, M. C., F.L.S., Tangore, Madras, East India.
 1887 MORISON, ALBERT EDWARD, M.B.C.M. Ed., M.R.C.S., Hartlepool.
 F.F. MORTON, THOMAS, M.D. Lond., M.R.C.S., L.S.A., *President of the Harveian Society of London, 15, Greville Road, Kilburn, n.w.* C. 1889-o.
 F.F. MOULLIN, J. A. MANSELL, M.D., M.R.C.P., *Physician to the Hospital for Women, Soho; Assistant Physician for Diseases of Women to the West London Hospital, 69, Wimpole Street, w.* C. 1884. Hon. Sec. 1887-8. V.P. 1889.
 1887 MOWAT, DANIEL, M.D., Holmwood, Stamford Hill, N.
 L. 1885 MUNDÉ, PAUL F., M.D., 20, West Forty-fifth Street, New York, U.S.A. *Professor of Gynecology at the New York Polyclinic, and at Dartmouth College.* V.P. 1886.
 F.F. MUNRO, ROBERT H., M.B., C.M. Edin., Friockheim, Forfarshire.
 F.F. MURPHY, JAMES, M.D., *Surgeon to the Sunderland Hospital for Women and Children, Holly House, Sunderland.* Hon. Loc. Sec. C. 1889-90.
 1887 MURRAY, CHARLES STORMONT, L.R.C.S. Ed., L.S.A., L.M. Ed., 85, Gloucester Place, Portman Square, w.
 1885 MURRAY, ROBERT MILNE, M.B. Edin., M.R.C.P. Edin., *Secretary Edinburgh Obstetrical Society; Lecturer on Gynecology, Edinburgh School; Physician for Diseases of Women to the Western Dispensary, 10, Hope Street, Edinburgh.* C. 1886.
 F.F. MUTCH, F. ROBERTSON, M.D., C.M. Aberd., 2, West Street, Sneinton, Nottingham.
 1889 NAUMANN, J. C. F., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., 125, Gower Street, w.c.
 L. 1886 NELSON, DANIEL THURBER, M.D., 2400, Indiana Avenue, Chicago, U.S.A.
 L. F.F. NETHERCLIFT, WILLIAM HENRY, F.R.C.S. Eng., Junior Athenæum Club, Piccadilly, w.
 L. F.F. NEUGEBAUER, FRANZ, M.D., *Assistant de la Clinique Gyniatrique à l'Université de Varsovie, Leszno, 33, Warsaw, Russia (Poland).* V.P. 1887.
 F.F. NOBLE, JAMES BLACK, M.R.C.S. Eng., L.R.C.P. & L.M. Edin., 51A, Trinity Square, Borough, s.e.
 F.F. NUNN, T. W., F.R.C.S., *Consulting Surgeon Middlesex Hospital, 8, Stratford Place, w.* C. 1884. V.P. 1886.
 F.F. NUTT, WILLIAM ANTHONY, L.S.A. Lond., Craven House, Northumberland Avenue.
 1885 O'DONNELL, THOMAS J., L.K.Q.C.P.I., L.M., L.R.C.S.I., Oorgaum Mysore State, India.
 L. 1889 O'CALLAGHAN, ROBERT, L.R.C.P., F.R.C.S.I., *Surgeon to the County Infirmary, Carlow, The Bungalow, Carlow.* C. 1891.

- Elected.
 F.F. OLIVER, JOHN FERENS, M.D., Ch.M. Edin., L.R.C.P.E. and L.R.C.S.E., 2, Hertford Gardens, Albert Bridge, s.w.
 1885 ORAM, RICHARD R. W., L.R.C.P. Lond., M.R.C.S.E., Cremyll, Wandsworth Common. C. 1890.
 L. 1889 OSTROM, H. J., M.D., 42, West 48th Street, New York, U.S.A.
 1887 OVENS, THOMAS, M.D., M.C., M.C.P.S., Arkona, Ontario, Canada.
- F.F. PADMAN, JOHN, M.R.C.S. Eng., 22, Bloomsbury Square, w.c.
 L. 1888 PARKINSON, J. TAYLOR, M.D., Brook View, Crystal Brook, South Australia.
 1886 PARSONS, JOHN INGLIS, M.D. Dur., *Physician to the Out-Patients, Chelsea Hospital for Women*, 3, Queen Street, Mayfair. W. C. 1890.
 1887 *PEARSE, T. FREDERICK, M.D. Bruss., L.R.C.P. Lond.
 1890 PHILLIPS, FRANK LESLIE, M.D. Brux., 393, Moseley Road, Birmingham.
 F.F. PICKETT, JACOB, M.D. St. And., L.R.C.P. Edin., L.M., M.R.C.S. Eng., L.M., L.S.A., 26, Colville Square, w.
 F.F. PIGG, THOMAS, M.D., *Consulting Physician to the Manchester Southern Hospital for Women and Children*, Bellagio, East Grinstead, Surrey.
 L. F.F. PINARD, ADOLPHE, M.D., *Professeur agrégé de la Faculté, Accoucheur de Lariboisière*, 11, Rue Rocquépine, Paris.
 1888 PITCAIRN, JOHN JAMES, L.R.C.P. Lond., M.R.C.S. Eng., H. M. Prison, Holloway, N.
 F.F. PLATT, WILLIAM HENRY, L.R.C.P. Edin., L.R.C.S.I., St. James's Lodge, West End Lane, Hampstead, n.w. C. 1890.
 1887 POCKOCK, FREDERICK ERNEST, M.D., M.R.C.S. Eng., L.S.A., The Limes, St. Mark's Road, North Kensington, w.
 L. 1885 POLK, WILLIAM M., M.D., *President New York Obstetrical Society*, 13, East Thirty-fourth Street, New York, U.S.A.
 1885 POOLEY, RICHARD CHARLES MASON, L.K.Q.C.P.I., Pensilva, Falmouth.
 1886 POPE, HARRY CAMPBELL, M.D., F.R.C.S. Lond., 280, Goldhawk Road, Shepherd's Bush. C. 1890.
 1886 PORTER, P., M.D., 33, East Adams Avenue, Detroit, Michigan, U.S.A.
 1888 POWELL, HENRY WILLIAM, L.R.C.P., National Conservative Club, Pall Mall, and P. and O. SS. "Victoria."
 F.F. *PRENDERGAST, J. MORGAN, M.D., M.C., M.R.C.S., L.M.
 1887 PRICE, JOSEPH, M.D., 500 N. 20th Street, The Preston Retreat, Philadelphia, U.S.A.
 1886 PRINGLE, JAMES HOGARTH, M.B., C.M., Torquhan, Stow, N.B.
 1885 *PROCKTER, ALFRED EDGCUMBE, M.R.C.S. Eng., L.R.C.P. Edin.
 F.F. PURCELL, FERDINAND ALBERT, M.D., M.Ch., R.V.I., M.R.C.S., L.M., Eng., *Surgeon to the Cancer Hospital, Brompton*, 7, Manchester Square, w. C. 1888-9
 1886 PURDON, RICHARD J., M.D., M.Ch., 14, College Square East, Belfast.
 L. F.F. PUREFOY, RICHARD DANCER, M.B., *Obstetric Surgeon, Adelaide Hospital*, 13, Merriion Square, Dublin. C. 1884-7.
- 1887 RAE, GEORGE A., L.R.C.P., L.R.C.S. Ed., 1, Outram Terrace, Stoke Devonport.
 1887 RANNEY, GEORGE E., M.D., Lansing, Michigan, U.S.A.

- Elected.
 F.F. RASCH, ADOLPHUS, A.F., M.D., M.R.C.P., *Physician for Diseases of Women and Children to the German Hospital; Physician to Training Hospital, Tottenham, 7, South Street, Finsbury, E.C.* C. 1891.
 F.F. RAWLINGS, JOHN ADAMS, M.R.C.P. Edin., *Physician to the Swansea Hospital, 4, Northampton Terrace, Swansea.* C. 1888-9.
 1887 *READMAN, T., L.R.C.P. Ed., L.M., &c., Wetherby, Yorks.
 L. 1887 REED, CHARLES A. L., M.D., Cincinnati, Ohio.
 F.F. REEVES, HENRY ALBERT, F.R.C.S. Edin., *Assistant Surgeon, London Hospital, Surgeon to the Hospital for Women, 7, Grosvenor Street, W.* C. 1884-7.
 F.F. REID, W. LOUDON, M.D. Glas., *Lecturer on Midwifery and Diseases of Women and Children, Western Medical School, Glasgow; Physician to the Glasgow Maternity Hospital, 7, Royal Crescent, Glasgow.* C. 1888-9.
 F.F. RICHARDSON, JOHN HUMPHREY HOWARD, M.R.C.S., L.S.A., 22, North Street, Wandsworth, S.W.
 1887 RICHMOND, THOMAS, L.R.C.P.E., L.F.P.S.G., 26, Burnbank Terrace, Glasgow.
 L. 1888 RICKETTS, E. S., M.D., 93, East Fourth Street, Cincinnati, Ohio, U.S.A.
 F.F. RILEY, JAMES, L.R.C.P. Edin., M.R.C.S. Eng., L.M., L.S.A., 131, St. George's Road, South Belgravia, S.W.
 L. F.F. ROBERTS, D. LLOYD, M.D., F.R.C.P., F.R.S. Edin., *Obstetric Physician to the Manchester Royal Infirmary, Physician to St. Mary's Hospital, Manchester, and Lecturer on Clinical Midwifery and the Diseases of Women in Owens College.* C. 1884. V. P. 1886.
 F.F. ROBERTS, THOMAS, L.S.A. Lond., Falloden House, 81, Tredegar Road, Bow, E.
 L. F.F. ROBERTSON, A. MILNE, M.D. Edin., Gonville House, Roehampton, S.W.
 1886 ROBINSON, JOHN, M.D., F.R.C.S. Eng., Midhurst, Sussex.
 1888 ROBSON, ARTHUR W. MAYO, F.R.C.S. Eng., L.R.C.P. Lond., Hillary Place, Woodhouse Lane, Leeds.
 F.F. ROOTS, WILLIAM HENRY, M.R.C.S. Eng., Kingston-on-Thames.
 L. 1885 ROSEBRUGH, JOHN WELLINGTON, M.D., Hamilton, Ont., Canada.
 L. 1883 ROSS, JAMES F. W., Wellesley and Sherborne Street, Toronto, Canada.
 F.F. ROUTH, CHARLES HENRY FELIX, M.D., M.R.C.P., *Consulting Physician to the Samaritan Free Hospital, 52, Montague Square, W.* V.P. 1884-7. C. 1888. Pres. 1890.
 F.F. RUSSELL, LOGAN, D. H., M.D., M.R.C.S., Government Park, St. Catherine, Jamaica.
 F.F. RYLEY, J. BERESFORD, M.D., M.R.C.S., L.R.C.P., 1, Bentinck Street, Manchester Square, W.
 F.F. SALTER, THOMAS KNIGHT, M.R.C.S. Eng., L.F.P.S.G., 23, Lower Seymour Street, W.
 F.F. SAVAGE, THOMAS, M.D., *Surgeon, Birmingham and Midland Hospital, 32, Newhall Street, Birmingham.* C. 1884-6. V. P. 1887.
 L. 1886 SAWYER, EDWARD WARREN, M.D., 3733, Vincennes Avenue, Chicago, U.S.A.
 1889 SCOTT, ALEXANDER THOMAS, M.R.C.S. Eng. and L.S.A., 8, Parkhurst Road, Camden Road, N.

- Elected.
 1887 SHAW, JOHN, M.D. Lond., M.R.C.P., Lond., Burlington House, Wil-
 loughby Road, Hampstead, N.W. C. 1888.
 F.F. SHAW, JOSEPHUS, M.D. Heidelberg, M.R.C.S. Eng., L.S.A. Lond.,
 151, Lower Road, Rotherhithe, S.E.
 F.F. SHEPPARD, WILLIAM DAVID, L.R.C.P. Edin., L.R.C.S.
 1886 SHERRARD, CÆSAR DUDLEY, L.K.Q.C.P., M.R.C.S., The Avenue,
 Eastbourne.
 1886 SIMMONS, HENRY FOURNESS, M.B., C.M., 30, Alberto Terrace, Darling-
 hurst, Sydney, New South Wales.
 1889 SIMPSON, ALEXANDER RUSSELL, M.D., *Professor of Midwifery and*
Diseases of Women, Edinburgh University, 52, Queen Street, Edin-
 burgh. V.P. 1890.
 1887 SIMPSON, DAVID, M.B., C.M. Aber., care of Messrs. Arbuthnot & Co.,
 Madras.
 1885 SIMPSON, JAMES HERBERT, M.D., Aberd., The Crescent, Rugby.
 C. 1887.
 1888 SIMPSON, ROBERT MILLS.
 1887 *SINCLAIR, DUGALD, M.B., C.M.
 1885 SINCLAIR, WILLIAM JAPP, M.D. Aber., *Physician to the Manchester*
Southern Hospital, 268, Oxford Road, Manchester.
 C. 1887-90. V.P. 1891.
 L. 1885 SKENE, ALEXANDER J. C., M.D., 167, Clinton Street, Brooklyn, N.Y.,
 U.S.A.
 F.F. SLIMON, WILLIAM, M.B. Glas., 4, York Place, Bow Road, E.
 1886 SLOAN, SAMUEL, M.D., *Physician to the Glasgow Maternity Hospital*,
 5, Somerset Place, Sauchiehall Street West, Glasgow. C. 1889.
 L. 1887 SMART, DAVID, M.B., B.Sc. Edin., *Assistant Surgeon Hospital for*
Women, Liverpool, 24, Hartington Road, Liverpool.
 1889 SMITH, ALFRED J., M.B., 32, Lower Baggot Street, Dublin.
 F.F. SMITH, E. T. AYDON, L.S.A., Disco House, 10, Alexandra Road, St.
 John's Wood, N.W.
 1887 SMITH, GEORGE COCKBURN, M.D. Bruss., M.R.C.S. Eng., L.R.C.P.,
 L.R.C.S. Edin., 187, Lavender Hill, S.W.
 F.F. SMITH, GILBERT THOMAS, M.R.C.S., L.S.A., Alrewas, Burton-on-
 Trent.
 L. F.F. SMITH, HEYWOOD, M.A., M.D., M.R.C.P., 18, Harley Street, W.
 Hon. Sec. 1884-5. C. 1889-90.
 1885 *SMITH, HOWARD LYON, L.R.C.P. Lond., M.R.C.S. Eng.
 1886 SMITH, JAMES GREIG, M.A., M.B. & C.M., *Assistant Surgeon to the*
Bristol Infirmary, 16, Victoria Square, Clifton, Bristol.
 C. 1887-9. V.P. 1890.
 F.F. SMITH, RICHARD T., M.D., *Physician to the Hospital for Women, Soho*,
 17, George Street, Hanover Square, W.
 C. 1884-7. Hon. Sec. 1889-90.
 F.F. *SMITH, R. W. BRUCE, M.D.
 F.F. SMYLY, W. JOSIAH, M.D., F.K.Q.C.P., *Master of Rotunda Hospital,*
Examiner in Midwifery, R.C.S., Dublin, Gynaecologist to the City
of Dublin Hospital, 56, Fitzwilliam Square, Dublin. C. 1888-90.
 F.F. SMYTH, BRICE, M.B., 13, College Square East, Belfast.
 C. 1887. V.P. 1889.
 F.F. SOUTTER, MANSFIELD COLLIER, M.R.C.S. Eng., 8, Cumberland Ter-
 race, Finsbury Park, N.
 F.F. SPANTON, W. DUNNETT, F.R.C.S. Edin., *Surgeon to the North*
Staffordshire Infirmary, Chatterley House, Hanley, Staffordshire.
 C. 1887-9. V.P. 1890.

Elected.

- F.F. STACK, JOHN JOSEPH, L.R.C.P. Edin., L.M., L.R.C.S.I., L.M.
Coombe Hospital, Dublin.
- 1885 STEELE, CHARLES EDWARD, M.R.C.S. Eng., L.S.A. Lond.
- F.F. STEER, WILLIAM, M.R.C.S., L.S.A., *Medical Superintendent, Fulham Union Infirmary*, Fulham Palace Road, Hammersmith, w.
- 1889 STEKOULIS, CONSTANTIN, M.D., Constantinople.
- 1885 STEVENSON, EDMUND SINCLAIR, L.R.C.P. Edin., M.R.C.S. Eng., Rondebosch, Cape of Good Hope.
- L. 1888 STONE, ISAAC S., M.D., 1309, H. Street, N.W. Washington, D.C., U.S.A.
- 1885 STRANGE, FREDERICK WILLIAM, M.R.C.S. Eng., M.C.P. & S. Ontario, 218, Simcoe Street, Toronto.
- L. 1886 STRANGE, W. HEATH, M.D., 5, Grosvenor Street, w.
- 1886 STUBBS, PERCY BELFORD TRAVERS, L.R.C.P., L.R.C.S., 331, King Street, Hammersmith, w.
- 1885 SUNDERLAND, SEPTIMUS, M.D., M.R.C.S., L.R.C.P. Lond., *Physician to the Royal Hospital for Women and Children*, 155, Gloucester Road, South Kensington.
- L. 1885 SUTTON, RHOADS STANBURY, M.D., 419, Penn Avenue, Pittsburgh, U.S.A.
- F.F. SWAIN, W. PAUL, F.R.C.S., *late Surgeon Royal Albert Hospital, Devonport*, 17, The Crescent, Plymouth. C. 1884-7.
- F.F. SWAYNE, JOSEPH GRIFFITHS, M.D. Lond., *Consulting Physician-Accoucheur, Bristol General Hospital*, 74, Pembroke Road, Clifton, Bristol. V.P. 1886-8
- F.F. *SWEENEY, MICHAEL PATRICK, L.R.C.S.I., 158, Lavender Hill, Clapham Junction, S.W.
- L. 1888 SWEETNAM, LESSLIE MATTHEW, M.D., Toronto, Canada.
-
- L. F.F. TAIT, LAWSON, F.R.C.S., *Surgeon to the Birmingham and Midland Hospital for Women*, 7, The Crescent, Birmingham. V.P. 1884-6. Pres. 1886. C. 1887-9.
- 1886 TAPSON, JOSEPH ALFRED, M.R.C.S. Eng., Holmwood, Clapham Common, S.W.
- L. F.F. TAYLER, WILLIAM HENRY, M.D. St. And., M.R.C.S. Eng., L.M., L.S.A., Tudor House, Anerley Road, Anerley, S.E.
- L. F.F. TAYLOR, JOHN WILLIAM, F.R.C.S., *Surgeon to the Birmingham and Midland Hospital for Women*, 59, Bath Street, Birmingham. C. 1891.
- F.F. TEMPLE, THOMAS CAMERON, M.R.C.S., L.S.A., Sheffield, Beds.
- 1887 THOMAS, ARTHUR WILLIAM, M.R.C.S., L.S.A. Lond., Berwyn, Bolingbroke Grove, Wandsworth Common, S.W.
- F.F. THOMAS, HUGH, M.R.C.S., L.S.A., The Grange, Coventry Road, Birmingham.
- 1888 THOMPSON, ARTHUR SEPTIMUS, 86, Howard Street, Toronto, Canada.
- 1886 THOMPSON, J. H., M.D., 60, Via Due Macelli, Rome.
- 1885 THOMSON, DAVID, M.D., 37, Castle Street, Luton.
- F.F. *THOMSON, GEORGE JAMES CRAWFORD, M.B., M.R.C.S., L.S.A.
- 1886 THORPE, GEORGE, L.S.A., Markhouse Road, Walthamstow.
- L. 1889 TOWNSEND, FRANKLIN, Jun., M.D., 2, Park Place, Albany, N.Y., U.S.A.

Elected.

1889 TUCK, HARRY, M.R.C.S.

1889 TUOHY, JOHN FRANCIS, M.D., M.Ch., *Surgeon I.M.S.*, 18, Mardyke, Cork.

L. 1887 UNDERWOOD, EDWARD F., M.D., Port Bombay, India.

L. 1885 VAN DER VEER, ALBERT, M.D., 28, Eagle Street, Albany, New York, U.S.A.

1885 WALKER, CHARLES ROTHERHAM, M.D. Brussels, L.R.C.P. Lond., M.R.C.S., Kirkdale, Leytonstone, E.

1887 WALKER, FERNANDO F., M.D.

L. 1888 WALKER, DR. HOLFORD, 56, Isabella Street, Toronto, Ontario, Canada.

1889 WALKER, R. EDEN, New Westminster, B.C., Canada.

1889 WALLACE, ABRAHAM, M.D. Edin., M.B. and C.M., 64, Harley Street, W.

L. F.F. WALLACE, JOHN, M.D., *Obstetric Physician, Liverpool Royal Infirmary, Professor of Midwifery and Gynecology, Liverpool Royal Infirmary*, 1, Gambier Terrace, Canning Street, Liverpool. C. 1884-6.L. F.F. WALTER, WILLIAM, M.D., *Surgeon to St. Mary's Hospital, Manchester*, 20, St. John Street, Manchester.

C. 1884-91. Hon. Loc. Sec. V.P. 1888-90.

1889 WARREN, DR., Kew, Melbourne, care of Messrs. Holness & Co., Paternoster Row, E.C.

F.F. WEBB, VERN GEORGE, L.K.Q.C.P.I., L.M., Brandon Lodge, Wood Green, N.

1889 WEBSTER, THOS. J., M.R.C.S. Eng., L.S.A., Brynglas, Merthyr Tydvil, S. Wales.

F.F. WELLS, ALFRED GEORGE, M.R.C.S. Eng., L.S.A., Keith House, North End Road, West Kensington, S.W.

F.F. WELLS, CHARLES, M.D., 69, Finchley New Road, N.W.

1886 WHITE, JOHN VERNON, M.D., Oscoda, Michigan, U.S.A.

L. F.F. WHITE, SAMUEL GAMBLE, M.D., *Brigade Surgeon*, 45, George Street, Portman Square, W.

1887 *WHITTINGDALE, JOHN, F.L., B.A., M.B., B.C. Cantab., M.R.C.S. Eng.

1886 WHITTLE, EDWARD GEORGE, M.D. Lond., 9, Regency Square, Brighton. C. 1889-90.

F.F. WHICKERS, HENRY ADOLPHUS, L.R.C.P. Lond., M.R.C.S. Eng., 59, Upper Tollington Park, N.

F.F. *WILLIAMS, ALBERT, M.D., C.M., Aberd.

1890 WILLIAMS, CYRIL JOHN, L.R.C.P., Woodhall Spa, Lincolnshire.

L. 1888 WILLIS, C. FAN COURT, M.B., L.R.C.P., Satara, Bombay.

1888 WILSON, F., M.D., M.R.C.S., Flaauwkraal, P.O., District Wodehouse, Cape Colony.

1887 WILSON, EDWARD, L.R.C.P. Lond., M.R.C.S. Eng., 3, North Villas, Camden Square.

L. 1886 WILSON, H. P. C., M.D., *Gynecologist to St. Vincent's Hospital*, 146, Park Avenue, Baltimore, U.S.A. V.P. 1891.

Elected.

- L. F.F. WILSON, ROBERT T., M.D., *Assistant Surgeon, Women's Hospital of Maryland*, 152, Park Avenue, Baltimore, Maryland, U.S.A.
- F.F. WILSON, WILLIAM, M.D., 80, Broad Street, Pendleton, Manchester.
- 1888 WITHINSHAW, CHARLES WESLEY, L.R.C.P. Edin., L.R.C.S. Edin.,
12, Mayflower Road, Clapham, s.w.
- 1887 WOOD, EDWARD, M.D., L.R.C.P.L., M.R.C.S.E., L.S.A., Globe
Lodge, Windmill Hill, Enfield.
- WOOD, JAMES C., M.D., Ann Arbor, Mich., U.S.A.
- 1889 Worrall, RALPH, M.D., 20, College Street, Sydney, N.S.W.
- F.F. WORTHINGTON, GEORGE FINCH JENNINGS, M.K.Q.C.P., Sidcup,
Kent.
- F.F. WORTS, EDWIN, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., 6, Trinity
Street, Colchester.
- 1888 *WYBORN, ARTHUR HENRY, L.K.Q.C.P.I.
- L. 1885 WYLIE, WALKER GILL, M.D., 40, West Fortieth Street, New York,
U.S.A.
- F.F. WYMAN, W. SANDERSON, M.D., Red Brae, 18, Putney Hill, s.w.
- 1889 ZOUCHE, ISAIAH DE, M.D., D.C.M. Ireland, Dunedin, New Zealand.

Honorary Fellows.

- 1885 BARKER, FORDYCE, M.D. (New York)
1885 BRAUN, CARL, M.D. (Vienna)
1885 CRÉDÉ, E., M.D. (Leipzig)
1885 EMMET, THOMAS ADDIS, M.D. (New York)
1885 GOODELL, WILLIAM, M.D. (Philadelphia)
1885 HARVEY, ROBERT, M.D. (Calcutta)
1885 HEGAR, F., M.D. (Freibourg)
1885 HUGENBERGER, A., M.D. (Moscow)
1885 KEITH, THOMAS, M.D. (Edinburgh)
1885 KOEBERLÉ, F., M.D. (Strasbourg)
1885 LAZAREWITCH, J., M.D. (St. Petersburg)
1885 MARTIN, A., M.D. (Berlin)
1885 PORRO, S., M.D. (Milan)
1885 TARNIER, S., M.D. (Paris)
1885 THOMAS, T. GAILLARD, M.D. (New York)
1885 WINCKEL, F., M.D. (Dresden)
1887 BARNES, ROBERT, M.D. (London)
1887 TAIT, LAWSON, F.R.C.S. (Birmingham)

Past Presidents of the Society.

- 1885 ALFRED MEADOWS, M.D., F.R.C.P.
1886 LAWSON TAIT, F.R.C.S.
1887 G. GRANVILLE BANTOCK, M.D., F.R.C.S. Ed.
1888 ARTHUR W. EDIS, M.D., F.R.C.P.
1889 ARTHUR V. MACAN, M.B., F.K.Q.C.P.
1890 C. H. F. ROUTH, M.D.

LOCAL LIST.

Aberystwith.

Harries, T. D., L.R.C.P., F.R.C.S.

Albany, U.S.A.

Boyd, J. P., M.D.
Townsend, F., Jun., M.D.
Van der Veer, A., M.D.

Amsterdam, Holland.

Mendes de Leon, M.A., M.D.

Arkona, Canada.

Ovens, T., M.D., M.C., M.C.P.S.

Axminster.

Callaghan, J. L., L.R.C.P., L.R.C.S.

Baltimore, U.S.A.

Wilson, H. P. C., M.D.
Wilson, R. T., M.D.

Bedford.

Goldsmith, G. P., M.D.

Belfast.

Aicken, W., M.D.
Boyd, J. St. Clair, M.D.
Byers, J. W., M.A., M.D., M.Ch.
Dempsey, A., M.D., L.R.C.S.
Dickey, S., M.D.
Mackenzie, W. G., F.R.C.S.
McMordie, W. R. N., M.D.
Purdon, R. J., M.D., M.Ch.
Smith, J., F.F.P.S.G.
Smyth, B., M.B.
Spedding, B. H., L.R.C.P. & S.

Berlin.

Martin, A., M.D.

Birmingham.

Hawkins, A. F., L.R.C.P., F.R.C.S.
Phillips, F. L., M.D.
Savage, T., M.D.
Tait, L., F.R.C.S.
Taylor, J. W., F.R.C.S.
Thomas, H., M.R.C.S.

Blenheim, N.Z.

Cleghorn, George, M.D.

Bombay, India.

D'Monte, D. A., M.D., L.R.C.P.
Underwood, E. F., M.D.

Bonar Bridge.

Macpherson, C., M.B.

Boston.

Baker, W. H., M.D.
Bigelow, H. R., M.D.

Brighton.

Hodson, H. A., M.R.C.S., L.R.C.P.
Whittle, E. G., M.D.

Bristol.

Smith, J. G., M.A., M.B.C.M.
Swayne, J. G., M.D.

Brooklyn, U.S.A.

Jewett, C., M.D.
Jones, C. N. D., M.D.
Skene, A. J. C., M.D.

Buda Pesth, Hungary.

Dirner, G. A., M.D.

Burton-on-Trent.

Smith, G. T., M.R.C.S.

Calcutta, India.

Harvey, R., M.D.
Joubert, C. H., M.B., F.R.C.S.

Cambridge.

Hough, J. H., M.A., M.R.C.S.

Campten.

Johnson, J. B., M.D.C.M.

Carlou.

O'Callaghan, R. T. A., L.K.Q.C.P.I.,
F.R.C.S.I.

Cawnpore, India.

Condon, J. H., M.D., M.R.C.S.

Chicago, U.S.A.

Byford, W. H., M.D.
Dudley, E. C., B.A., M.D.
Fenger, C., M.D.
Jackson, A. R., M.D.
Jaggard, W. W., M.D.

Knox, J. S., M.D.
Merriman, H. P., M.D.
Miller, D. L., M.D.
Nelson, D. T., M.D.
Sawyer, E. W., M.D.

Chippenham.

Jay, H. M., M.D.

Chipping Norton.

Hutchison, G. H., M.D., M.R.C.P.

Cincinnati, U.S.A.

Hall, R. B., M.D.
Ricketts, E. S., M.D.

Cleveland, U.S.A.

Carpenter, A. B., M.D.
Humiston, W. H., M.D.

Colchester.

Worts, E., L.R.C.P., M.R.C.S.

Constantinople, Turkey.

Stekoulis, C., M.D.

Copenhagen, Denmark.

Heiberg, W., M.D.

Cork.

Tuohy, J. F., M.D., M.Ch.

Crawley.

Hitchins, T. J., M.D., M.R.C.S.,
L.R.C.P.

Crystal Brook, S. Australia.

Parkinson, J. T., M.D.

Danville, U.S.A.

Johnstone, A. W., M.D.

Detroit, U.S.A.

Carstins, J. H., M.D.
Manton, W. P., M.D.
Porter, P., M.D.

Devonport.

Rae, George A., L.R.C.P. & S.

District Wodehouse, Cape Colony.

Wilson, F., M.D., M.R.C.S.

Dresden, Saxony.

Winckel, F., M.D.

Dublin.

Bagot, W. S., M.B.
Cranny, J. J., M.D., F.R.C.S.
Kennedy, H. B., L.R.C.S.
Macan, A. V., M.B., M.Ch., M.A.
Purefoy, R. D., M.B.
Smith, A. J., M.B.
Smyly, W. J., M.D., F.K.Q.C.P.I.

Dunedin, N.Z.

Batchelor, F. C., M.D.
Closs, J. O., M.B.
Maunsell, H. W., M.B.
Zouche, I. de., M.D.

Eastbourne.

Sherrard, C. D., L.K.Q.C.P.I., M.R.C.S.

Edinburgh.

Barbour, A. H. F., M.A., B.Sc., M.D.
Croom, J. H., M.D.
Haultain, F. N., M.D.
Murray, R. M., M.B., M.R.C.P.
Simpson, A. R., M.D.
Keith, T., M.D.

Ely.

Wilson, E., L.R.C.P., M.R.C.S.

Falmouth.

Pooley, R. C. M., L.K.Q.C.P.I.

Folkestone.

Fitzgerald, C. E., M.D.
Lewis, H., M.D.

Freeport, U.S.A.

Caldwell, W. S., M.D.

Freibourg, Switzerland.

Hegar, F., M.D.

Friockheim.

Munroe, R. H., M.B.C.M.

Geneva.

Cordes, A. E., M.D., M.R.C.P.

Glasgow.

Bell, Robt., M.D., F.F.P.S.G.
Sloan, S., M.D.
Wallace, A., M.D., M.C.

Goole.

Bramwell, J. M., M.B.C.M.

Guelph, Canada.

Macphatter, N. L., M.D.

Halifax.

Dolan, T. M., M.D., F.R.C.S.

Halstead.

Kellett, R. G., L.K.Q.C.P.I.

Hamilton, Canada.

Rosebrugh, J. W., M.D.

Hanley.

Spanton, W. D., F.R.C.S.

Harrogate.

Black, J. G., M.D.

- Hartlepool.*
Morison, A. E., M.B.C.M., M.R.C.S.
- Hereford.*
Giles, P., M.R.C.S., L.R.C.P.
- Hitchin.*
Cattell, G. T., L.R.C.P., M.R.C.S.
- Horncastle.*
Hadden, J., M.D.
- Huddersfield.*
Clarke, T. K., M.D., F.R.C.S.
Draper, J. W., L.R.C.P., M.R.C.S.
- Huelva, Spain.*
Mackay, W. A., M.D.
- Hull.*
Aikman, A., M.B.
Fairbank, H. S., M.B., C.H.
- Hythe.*
Hackney, J., M.D., M.R.C.S.
- Inverarie.*
Galloway, A. R., M.D.
- Kars, Canada.*
Jamieson, A., M.D., C.M.
- Knoxville, U.S.A.*
Tadlock, A.B., M.D.
- Lahore, India.*
Bowen, W. A., M.R.C.S.
- Lansing, U.S.A.*
Rannay, G. E., M.D.
- Leamington.*
Clark, Jas. F., M.R.C.S.
- Leeds.*
Allan, Jas., M.A., M.D.
Heald, B. G., L.R.C.P., L.F.P.S.G.
Hellier, J. B., M.D.
Robson, A. W. M., F.R.C.S., L.R.C.P.
- Leipzig, Saxony.*
Créde, E., M.D.
- Lincoln, U.S.A.*
Stone, J. S., M.D.
- Litcham.*
Dundas, M. George, M.R.C.S.
- Liverpool.*
Alexander, W., M.D.
Bailey, F. J., L.R.C.P., M.R.C.S.
Burton, J. E.
Davies, E. T., M.D.
Edis, J. B., M.R.C.S., L.R.C.P.
Grimsdale, T. B., M.B., M.R.C.S.
- Hawkes, A. E., M.D., L.R.C.P. & S.
Imlach, F., M.D., M.R.C.S.
Leicester, A. Wm., M.B., C.M.
McGeagh, W., M.D.
Smart, D., M.B., B.Sc.
Wallace, J., M.D.
- Llandyssul.*
Evans, E. R., L.R.C.P. & S.
- London.*
Ambrose, Robt., B.A., L.R.C.P.
Ashton, Jas. T., M.B., C.M.
Aveling Jas. H., M.D.
Ayling, A. H. W., L.S.A.
Bantock, G. Granville, M.D.
Barbour, Jas., M.D.
Barkley, C. H.
Barnes, R., M.D., F.R.C.P.
Barnes, R. S. Fancourt, M.D., M.R.C.P.
Barrett, A. E., M.R.C.S., L.S.A.
Barrett, H., M.R.C.S.
Barter, Wm., M.D., M.Ch., M.A.O.
Bateman, A. G., M.B., C.M.
Bateman, F. A. N., L.R.C.P., M.R.C.S.
Bayfield, H. O., L.R.C.P., L.F.P.S.G.
Beardmore, G. H., L.R.C.P., M.R.C.S.
Beckett, J., M.D.
Bennett, C. H., M.D.
Bertolacci, J. H., L.S.A.
Biggs, M. G., M.R.C.S.
Bird, George G., M.R.C.S.
Blake, Ed., M.D.
Borel, Fr., M.D.
Bourns, N. W., M.D.
Bowie, Alex., M.D., C.M.
Brown, C. H. Gage, M.B., C.M.
Bulleid, E. G., L.R.C.P., L.R.C.S.
Burford, G. H., M.B., C.M.
Buxton, D. W., M.D., B.S., M.R.C.P.
Cambridge, T. A., M.R.C.S., L.S.A.
Cameron, Jas., M.D.
Campbell, W. F., L.R.C.P., L.F.P.S.G.
Carfrae, George, M.D.
Carter, George Roe, L.R.C.P. & R.C.S.
Carvell, J. M., L.S.A.
Case, Wm., M.R.C.S.
Chant, Thomas, M.R.C.S.
Clarke, F. G. B., M.D., C.M.
Cock, W., M.R.C.S., L.R.C.P.
Coffin, R. M., F.R.C.P.
Coffin, T. W., F.R.C.S.
Coleman, C. A., M.D.
Cooney, J. E., L.R.C.P.
Craigie, J. H., F.R.C.S.
Crichton, Geo., M.B., L.R.C.S.
Cripps, C. C., M.D., M.R.C.S.
Crisp, E. H., L.R.C.P., M.R.C.S.
Dewar, J., L.R.C.P., L.R.C.S.

- Dickinson, T. V., M.D.
 Dickson, C. C., L.R.C.P. & S.
 Dingle, W. A., L.R.C.P., M.R.C.S.
 Dingley, W., M.R.C.S.
 Dixon, J., M.B., C.M.
 Drake-Brockman, E. F., F.R.C.S.,
 L.R.C.P.
 Duke, B., M.R.C.S.
 Dunbar, J. J. M., M.D.
 Edis, A. W., M.D., F.R.C.P.
 Edwards, T. E., L.R.C.P., M.R.C.S.
 Ensor, E. T., M.D.
 Erskine, W., M.D.
 Eve, R. W., M.B.
 Fearnley, W., L.R.C.S.
 Fenton, W. H., M.D.
 Fenwick, B., M.D., M.R.C.P.
 Fleming, R. G., M.D., L.R.C.S.
 Fordham, J. W., L.R.C.P.
 Fuller, C. C., F.R.C.S.
 Fuller, L., M.R.C.S.
 Gardiner, B. H. J., L.R.C.P., M.R.C.S.
 Gimson, T. S., M.R.C.S.
 Gloster, J., M.B., C.M.
 Greet, C. H., L.S.A.
 Griffith, G. de G., L.R.C.P., M.R.C.S.
 Griffiths, C. T., L.R.C.P., M.R.C.S.
 Grigg, W. C., M.D., M.R.C.P.
 Groth, E. R. G., M.D., L.R.C.P.
 Groves, H. E., M.R.C.S.
 Gubb, A. S., L.R.C.P., M.R.C.S.
 Hall, A. R., M.D., L.R.C.P., M.R.C.S.
 Harkness, A., L.R.C.P.
 Harper, C. J., L.R.C.P., M.R.C.S.
 Harper, Jas., M.D.
 Harris W. H., M.D.
 Hasard, J., M.R.C.S.
 Haslam, W. D., M.R.C.S.
 Hebert, P. Z., M.D., M.C., L.R.C.P.
 Hicks, G. B., M.R.C.S., L.R.C.S.
 Hills, A. Phillips, M.R.C.S.
 Hine, A. C., L.R.C.P., M.R.C.S.
 Hocken, C. E., M.D.
 Hodgson, R. H., L.R.C.P., M.R.C.S.
 Holland, E., M.D., M.R.C.P.
 Howell, H. S., M.D., F.R.C.S.
 Ingleby-Mackenzie, J., M.B., M.R.C.S.
 Isdell, F., A.B., M.B.
 Jackson, J., M.R.C.S.
 James, W. C., M.D.
 Jessett, F. B., F.R.C.S.
 Johnstone, W. B., M.D.
 Jones, H. M., M.D.
 Jones, J. S., M.R.C.S., L.R.C.P.
 Jones, L., M.D., M.R.C.S.
 Keller, O. E., M.D.
 Kempster, H., M.B., M.R.C.S.
 Kennedy, J. B., M.R.C.S.
 Kennedy, S., F.R.C.S., L.R.C.S.
 Kiallmark, H. W., M.R.C.S.
 Lamprey, R. O., L.R.C.P. & S.
 Langley, A., L.R.C.P. & S.
 Leslie, R., M.D., M.R.C.S.
 Leslie, W. M., M.B., C.M.
 Ligertwood, T., M.D.
 Light, E. M., M.A., M.D.
 Llewellyn, R. R., L.R.C.P., M.R.C.S.
 Lloyd, S., M.D.
 Long, W. D., L.S.A.
 Low, R. M. P., M.B., L.R.C.P. & S.
 Macan, J. J., M.A., M.R.C.S.
 MacGavin, J., L.R.C.P. & S.
 Mackern, J., M.D.
 Marsh, T. C., M.R.C.S., L.R.C.P.
 McMullen, W., L.K.Q.C.P.I., L.R.C.S.
 Miller, A., M.D.
 Moir, J., M.D.
 Moore, S. H., F.R.C.S.
 Morton, T., M.D., M.R.C.S.
 Moullin, J. A. M., M.D., M.R.C.P.
 Mowat, D., M.D.
 Murray, C. S., L.R.C.S.
 Naumann, J. C. F., L.R.C.P., M.R.C.S.
 Neatby, E. H., M.D., L.R.C.P., M.R.C.S.
 Netherclift, W. H., F.R.C.S.
 Noble, J. B., M.R.C.S., L.R.C.P.
 Nunn, T. W., F.R.C.S.
 Nutt, W. A., L.S.A.
 Oliver, J. F., M.D., C.M., L.R.C.P. & S.
 Oram, R. R. W., L.R.C.P., M.R.C.S.
 Padman, J., M.R.C.S.
 Parsons, J. I., M.D.
 Pickett, J., M.D., L.R.C.P., M.R.C.S.
 Pitcairn, J. J., L.R.C.P., M.R.C.S.
 Platt, W. H., L.R.C.P., L.R.C.S.
 Pocock, F. E., M.D., M.R.C.S.
 Pope, H. C., M.D., F.R.C.S.
 Powell, H. W., L.R.C.P.
 Pridham, C. W., F.R.C.S., M.R.C.P.
 Purcell, A. A., M.D., M.Ch., M.R.C.S.
 Rasch, A. A. F., M.D., M.R.C.P.
 Reeves, H. A., F.R.C.S.
 Richardson, J. H. H., M.R.C.S.
 Riley, J., L.R.C.P., M.R.C.S.
 Roberts, T., L.S.A.
 Robertson, A. M., M.D.
 Roots, W. H., M.R.C.S.
 Routh, C. H. F., M.D., M.R.C.P.
 Ryley, J. B., M.D., M.R.C.S., L.R.C.P.
 Salter, T. K., M.R.C.S., L.F.P.S.G.
 Scott, A. T., M.R.C.S.
 Shaw, J., M.D., M.R.C.P.
 Shaw, J., M.D., M.R.C.S.
 Simpson, R. M.
 Slimon, W., M.B.
 Smith, E. T. A., L.S.A.

Smith, G. C., M.D., M.R.C.S.,
L.R.C.P. & S.
Smith, Heywood, M.A., M.D., M.R.C.P.
Smith, R. T., M.D.
Soutter, M. C., M.R.C.S.
Stack, J. J., L.R.C.P., L.R.C.S.I.
Steer, W., M.R.C.S.
Strange, W. H., M.D.
Stubbs, P. B. T., L.R.C.P. & S.
Sunderland, S., M.D., M.R.C.S.,
L.R.C.P.
Tapson, J. A., M.R.C.S.
Tayler, W. H., M.D., M.R.C.S.
Thomas, A. W., M.R.C.S.
Travers, W., M.D.
Tuck, H., M.R.C.S.
Walker, C. R., M.D.
Webb, V. G., L.R.Q.C.P.I.
Wells, A. J., M.R.C.S.
Wells, C., M.D.
Wheeler, J., M.D. Mch.
White, S. G., M.D.
Wickers, H. A., M.R.C.S., L.R.C.P.
Willson, H., M.R.C.S.
Withinshaw, C. W., L.R.C.P. & S.
Wood, E., M.D., L.R.C.P., M.R.C.S.
Wyman, W. S., M.D.

Luton.

Thomson, D., M.D.

Madras, India.

Dewes, F. J., L.R.C.P., M.R.C.S.

Maidstone.

Johnston, J., M.R.C.S.

Manchester.

Armstrong, W., M.R.C.S.
Darwin, G. H., F.R.C.S.
Le Page, J. F., M.D., L.R.C.P.
Mackintosh, G. D., M.D.
Roberts, D. L., M.D., F.R.C.P.
Sinclair, W. J., M.D.
Walter, W., M.D.
Wilson, W., M.D.

Melbourne.

Adam, Geo. Rothwell, M.B., C.M.
Clendinnen, F. J., M.D.
Headley, W. B., M.A., M.D., M.R.C.P.
Hooper, J. W. D., L.R.C.P. & S.
Warren, Dr.

Memphis, U.S.A.

Maury, R. B., M.D.

Merthyr Tydfil.

Cresswell, P. R., F.R.C.S.
Webster, T. J., M.R.C.S.

Michigan, U.S.A.

Kellogg, J. H., M.D.

Midhurst.

Robinson, J., M.D., F.R.C.S.

Milan, Italy.

Porro, S., M.D.

Montreal, Canada.

Alloway, T. Johnson, M.D.
Cameron, T. C., M.D.
Gardner, W., M.D.
MacCallum, D. C., M.D.

Moscow, Russia.

Hugenberger, A., M.D.

Nashville, U.S.A.

Douglas, R., M.D.

Newcastle.

Benington, R. C., L.R.C.P., M.R.C.S.

New Malden.

Child, Edwin, M.R.C.S.

New Orleans, U.S.A.

Weathersby, W. C., M.D.

New Westminster, B.C. Canada.

Walker, R. E.

New York, U.S.A.

Barker, Fordyce, M.D.
Chambers, P. F., M.D.
Emmett, T. A., M.D.
Greene, L. M., M.D.
Hanks, H. T., M.D.
Hunter, J. B., M.D.
Lusk, W. T., M.D.
Mundé, P. S., M.D.
Ostrom, H. J., M.D.
Polk, W. M., M.D.
Thomas, T. G., M.D.
Walker, F. F., M.D.
Wylie, W. G., M.D.

Normal Park, Illinois.

Arnold, J., M.D.

Norwich.

Masson, G. B., L.R.C.P. & S.

Nottingham.

Elder, George, M.D.
Mutch, F. R., M.D., C.M.

Oakland, U.S.A.

Aiken, George H., M.D.

Oorgaum, India.

O'Donnell, T., L.K.Q.C.P.I., L.R.C.S.I.

Oscoda, U.S.A.

White, J. W., M.D.

Padstow.

Marley, H. F., M.R.C.S., L.R.C.P.

Palermo, Canada.

McCrimmon, M., M.D., M.R.C.S.

Paris.

Apostoli, Dr.

Auvard, A., M.D.

Budin, Pierre, M.D.

Crouzat, E., M.D.

Dessaigues, A. R., M.D.

Lablond, A., M.D.

Penard, A., M.D.

Tirnier, S., M.D.

Parkerville, U.S.A.

Bopkins, J. B., M.D.

Paterson.

Halleray, G. H., M.D.

Philadelphia, U.S.A.

Baldy, J. M., M.D.

Goodell, W., M.D.

Price, J., M.D.

Pittsburgh, U.S.A.

Sutton, R. S., M.D.

Plymouth.

Swain, P. W., F.R.C.S.

Portland Maine, U.S.A.

Baker, C. A., M.D.

Portsmouth.

Hackman, L. K. H., L.R.C.P. & S.

Rome, Italy.

Thompson, G. H., M.D.

Rome, U.S.A.

Battey, Robert, M.D.

Rondebosch, Cape of Good Hope.

Stevenson, E. S., M.R.C.S., L.R.C.P.

Rugby.

Simpson, J. H., M.D.

St. Catherine, Jamaica.

Russell, L. D. H., M.D., M.R.C.S.

St. Catherine's, Canada.

Merritt, Dr.

St. John, N. B. Canada.

Hetherington, G. A., M.D.

St. Leonards.

Duke, E., M.R.C.S.

St. Louis, U.S.A.

Engelmann, G. J., M.D.

St. Paul, U.S.A.

Case, Elias P., M.D.

St. Petersburg, Russia.

Lazarewitch, J., M.D.

San Francisco, U.S.A.

Cole, R. B., M.D., M.A., M.R.C.S.

Cushing, C., M.D.

Satara, India.

Willis, C. F., M.B., L.R.C.P.

Shanghai, China.

Jamieson, R. A., M.D.

Sheerness.

Arrol, Chas., M.D., C.M.

Sheffield, U.S.A.

Smith, H. H., M.D.

Shefford.

Temple, T. C., M.R.C.S.

Shelbyville, U.S.A.

Sheley, P. A., M.D.

Sidcup.

Worthington, G. F. J., M.K.Q.C.P.

Snaresbrook.

Elliot, H. F., M.R.C.P., F.R.C.S.

Southampton.

Allden, John A., M.R.C.S., L.S.A.

South Brisbane, Queensland.

Newton, J. L., M.R.C.S.

Southsea.

Knott, C., M.R.C.P.

South Shields.

Crease, J. R., F.R.C.S.

Stonham.

Cuthbert, W. W., M.R.C.S.

Stow.

Pringle, J. H., M.B., C.M.

Strasbourg, France.

Koeberlé, F., M.D.

Street.

Clarke, A., L.R.C.P., M.R.C.S.

Sunderland.

Murphy, J., M.D.

Swansea.

Rawlings, J. A., M.R.C.P.

Sydney, N.S.W.

Chambers, Thos., F.R.C.P.
 Simmons, H. F., M.B., C.M.
 Worrall, R., M.D.

Tanjou, India.

Mootoosawmy, M.C., F.L.S.

Tenby.

Hamilton, J. B., L.R.C.P.

Thornhill.

Mackie, J., L.R.C.P., L.F., P.S.G.

Toronto, Canada.

Féré, A. G., M.B.
 Jones, D. O., M.D., L.R.C.P.
 Ross, J. F. W.
 Strange, F. W., M.R.C.S., M.C.P. & S.
 Sweetman, L. M., M.D.
 Thompson, A. S.
 Walker, H., Dr.

Treharris.

Leigh, W. W., L.R.C.P., M.R.C.S.

Tunbridge Wells.

Manser, F., M.R.C.S.

Vienna, Austria.

Braun, C., M.D.

Ventnor.

Coghill, J. G. S., M.D., F.R.C.P.

Wareham.

Daniel, W., M.R.C.S.

Walthamstow.

Lake, W. W., M.R.C.S.
 Thorpe, G., L.S.A.

Warrington.

Adams, Jos., M.B., C.M.

Warsaw, Russia.

Neugebauer, F., M.D.

Washington, U.S.A.

Cook, S. L., M.D.
 Johnson, J. T., M.D.
 King, A. F. A., M.D.

Westgate-on-Sea.

Hill, J. Wood, L.R.C.P., M.R.C.S.

Weston-super-Mare.

Fraser, G. B., M.R.C.S.

Weymouth.

Laurie, J. M., M.D.

Windsor.

Hensman, F. H., M.R.C.S.

Wisbech.

Bury, E. C., M.R.C.S., M.D.

Wolverhampton.

Jackson, T. V., F.R.C.S.
 Lycett, J. A., M.D., M.R.C.P.

Woodford Wells.

Dixon, W. E., M.R.C.S.

Woodhall Spa.

Williams, C. J., L.R.C.P.

Woodstock, Canada.

Brownlee, Milne, M.D.

Fellows who have not communicated their addresses.

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Part XXI.

May, 1890.

THE BRITISH
GYNÆCOLOGICAL
JOURNAL
being the
JOURNAL OF THE
BRITISH GYNÆCOLOGICAL SOCIETY



Edited by
FANCOURT BARNES, M.D.

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Part XXII

August, 1890.

THE BRITISH
GYNÆCOLOGICAL
JOURNAL:
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